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Embryo donation: Motivations, experiences, parenting, and child adjustment

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Abstract

Embryo donation raises unique challenges for donors, recipients, and the resultant child, yet very little is known about the outcomes for those involved. This review summarises research on the motivations for donating and receiving embryos from others and the experiences that follow, including the outcomes for parenting and child adjustment. Research has shown that given the varied ways in which embryo donation is practiced, understanding the outcomes within different legislative and cultural contexts is vital. The lack of information on outcomes means that counsellors and psychologists have very little empirical evidence to guide them. Gaps in existing knowledge are identified as well as areas for future research.

Capsule

The scant research on psychosocial aspects of embryo donation means there is little empirical evidence to guide counsellors and psychologists. Understanding outcomes within different legislative and cultural contexts is vital.

Key words: Embryo donation, motivations, child, family

Introduction

Just under 2,500 embryo transfers using donor embryos are carried out per year in the United States of America (1), yet very little is known about the experiences of those involved in this type of family formation. When an individual or a couple donates their unused embryos to another individual or couple undergoing fertility treatment, if successful, two genetically-related children may be raised in different families.

Due to the psychosocial complexities involved, this family-building method has the potential to pose a range of challenges for donors, recipients and children (2). Challenges identified in the existing literature include concerns about the wellbeing of children conceived in this way due to the absence of genetic links with their parents, and concerns about the complex 'family' structures that this method of conception has the potential to create, including between the embryo donor(s), the recipient parent(s), both parties' child(ren) and other family members (3). In cases where embryos have been donated to multiple recipients, these potential networks may be even larger. Other concerns have been raised about how parents might approach the disclosure process with their child (if they do, in fact, intend to disclose the child's method of conception) (4), whether the knowledge of the existence of people in another family with whom they share genetic relationship(s) might be difficult to cope with (5), and how relationships between the multiple families (if relationships exist) might be managed. Embryo donation has also been identified as raising ethical issues due to its involvement of three parties with separate interests: embryo donors, embryo recipients, and the donor-child (6).

From the perspective of embryo donors, little is known about their motivations for donation, how they feel following the donation, and their decisions and experiences post-donation, including whether they desire contact with the recipient(s) and offspring, how any relationships are negotiated, and whether (and how) donors disclose the donation to their own families. Similarly, little empirical evidence exists on the experiences of recipient families, their decisions around donation type, contact preferences, relationships with donors, and decisions around whether, and how, to disclose the child's method of conception to the child and other family members. Embryo donors, recipients and offspring may have different views about any, or all, of these issues (7), and little is known about how decisions are negotiated both prior to donation and after the birth of the donor-child. Despite a growing literature on family functioning in families created through other

methods of assisted reproductive technologies (8), virtually nothing is known about psychological wellbeing in embryo donor or embryo recipient families post-donation. In this review we summarise the empirical research conducted and identify gaps in knowledge and directions for future research. With numbers of cycles using donor embryos increasing yearly (9), and 65% of clinics that report data to the CDC offering this treatment (1), understanding more about this method of family-building is particularly timely.

Motivations for donating embryos

Most of the limited research on embryo donors has examined their motivations for donating. Understanding the motivations for donating embryos is complicated by the variation in the way in which embryo donation is practiced which is likely to impact on the decisions of patients with embryos in storage (10). The few studies examining motivations for donating embryos have been conducted in Australia, New Zealand, the UK, Finland and the USA and have often included relatively small samples. Studies examining IVF patients' decisions about whether or not to donate surplus embryos have suggested that the decision is influenced by how patients conceptualize their embryos, and the extent to which they think of the embryos as 'their children' (or potential children) (10,11,12).

In an Australian study which included interviews with 15 patients who had donated their embryos and 33 patients who had discarded their embryos the authors found that the motivation for donating for each group was morally challenging and was influenced by their beliefs of what they did not wish to do. That is, rather than choosing the most appealing option, donors were avoiding what in their minds was the worst possible outcome, i.e of not giving their embryos a chance of life (13). In a study involving interviews with 22 donors in New Zealand, including 12 (6 couples) whose donations had resulted in the birth of a child, it was found that donors valued their genetic tie to the resultant child which led to feelings of connection (11,14). Even though they acknowledged that the donor-conceived child was not their child, they still felt a level of moral responsibility and interest in the wellbeing of the child. Many of the donors likened the donation to adoption, and donors and recipients often referred to each other using familial terms such as aunt or uncle (11). In New Zealand, the identity of the donors can be accessed by the resultant child, and this was seen as reassuring for many donors. The sense of responsibility that donors had for the resultant

child was also found to explain why donors may wish to be involved in the selection process of potential recipients. For example, in the New Zealand study, donors discussed wanting the recipients to be similar to themselves, including being financially secure, having support available, and being healthy and of an age where they can be around for the child. Furthermore, donors showed a preference for recipients who would be open with their child about their origins and enable future contact (14).

However, the findings from these studies are in direct contrast to another Australian interview-based study with 11 participants who had donated their embryos and found that unlike in the study by De Lacey (2007), donating embryos was the most attractive option for donors and they found the decision to be easy and obvious (10). In this study, the emphasis on the importance of gestation for parenting was evident amongst donors who did not view the resultant child as their own and did not use adoption metaphors in explaining their donation as was found in the study in New Zealand. The authors explained these contrasting findings as arising from the differing forms of legislation on embryo storage limits, with the patients in their study not being faced with mandated disposal of embryos. Furthermore, the authors emphasised the way in which embryo donation is framed is likely to impact whether or not donors liken it to adoption (10).

A study examining the decision-making of over 400 patients who had expressed interest in donating embryos at one fertility clinic in the US over a five-year period found that the majority of patients did not complete the donation (15). Interestingly, of those patients who did donate, almost half had used donor eggs in the creation of their embryos. The authors suggest that these patients may have prioritised genetic relatedness less in their definition of family, making them more likely to donate, or that donor egg recipients may be more likely to want to 'give back' to others.

Motivations for receiving donated embryos

A survey of 27 recipients of embryo donation in Denmark found that the decision to opt for donated embryos included having experienced repeated unsuccessful assisted reproductive techniques including IVF, ICSI or donor conception or having a genetic basis for infertility amongst one of the partners (6). In the study by Godeke et al., (2015) in New Zealand, the authors also interviewed 15 recipients of embryos. Similar to donors, recipients used adoption as a metaphor for explaining embryo donation, although they viewed embryo

donation as having additional benefits. That is, it provided parents with the opportunity to experience a pregnancy and birth like other couples, as well as parent the child from birth (11). In New Zealand, the connection to donors was valued by recipients and was seen to be ongoing and permanent, likely framed by the context in which embryo donation was conducted.

Experiences of embryo donation

Only a handful of studies have examined the experiences of donors and recipients once the child is born. Studies of embryo donation in the USA have included participants from a single agency where those relinquishing their embryos can choose the recipient of their donation and the agency mediates the relationship between the two parties involved (16; 17,18). These families therefore wanted, and established, contact with each other. It is also worth noting that this particular agency framed embryo donation as embryo 'adoption', a type of embryo donation developed in the 1990s by white American evangelical Christians (19) and that conceptualizes an embryo as similar to a live child (16). This will likely have influenced both the process of embryo donation for participants and the demographic profile of the participants who are involved in this route to parenthood, both of which may differ to individuals who pursue embryo donation via a fertility clinic.

One of these studies included survey responses of 17 donors and 28 recipients and interviews with 8 donors and 12 recipients. Participants valued the ability to contact each other prior to the donation with contact being maintained after the birth of the child. Once the child was born, whether the children were involved in this contact was seen as a separate issue for some. However, most children in the study were still young and thus for some participants this would likely become an issue when the children were old enough to make their own decisions about whether or not they wanted contact (16,18).

In contrast, in the Australian study by Millbank et al., (2017) relationships between the recipients and donors varied. Of importance is that unlike studies where donors wished to have some say in who received their embryos (12,17,18), the Australian study found that donors did not wish to be involved in the selection process. The authors called for legislative models that allowed flexibility and reflected the way in which donation was practiced (10).

Family functioning and child adjustment

To our knowledge, only one study has examined family functioning and child adjustment in families formed following embryo donation. A UK exploratory study of 21 embryo donation families, with a child aged between 2-5 years of age, compared parenting and child adjustment to 29 adoptive families and 30 families formed through in-vitro fertilisation. The study found no differences in couple relationship quality, parenting stress, anxiety or depression between the different groups. However, differences were found in parenting quality, with embryo donation mothers showing higher levels of emotional over-involvement than adoptive mothers but not IVF mothers. Embryo donation fathers showed greater emotional over-involvement compared to both adoptive fathers and IVF fathers and were also more defensive than adoptive fathers but not IVF fathers. However, children born following embryo donation were not at greater risk of psychological problems (4), a finding similar to results from a survey of 769 parents aged between 5-9 years which included 27 families formed through IVF embryo donation (20). In terms of disclosure, 2 of the 21 families had told their child about the method of conception with 5 stating that they were planning to tell their child. Nine were not planning to tell and 5 were undecided. In contrast, all of the adoptive parents reported that they had either told or were planning to tell the child about the adoption (21).

The families were revisited when the children were aged 5-9 years and once again, were found to be generally functioning well. Embryo donation parents did however continue to show higher levels of emotional involvement in their child compared to adoptive parents (22). In terms of disclosure, only 3 of the 17 embryo donation mothers had told their child about the method of conception with 4 stating that they planned to tell in the future, 8 stating that they would not tell, and 2 being undecided. These rates of disclosure were similar to sperm donation families and lower than egg donation families (23), and raise questions about whether lacking a genetic connection between both parents and the child might result in parents perceiving a greater threat to the parent-child relationship than families where only one parent lacks a genetic connection. On the other hand, it is possible that because embryo donation parents experience the pregnancy and birth of their child, it may make them feel that there is no need to tell the child about their method of conception (24).

The rates of disclosure in the study by MacCallum and Golombok (2007) were also lower than those of a Finnish study in which it was reported that 69% of embryo donation

recipients believed that children should be told about how they were conceived (6). However, not all of the participants in the Finnish study had had children and of those who had, over half had not disclosed the use of embryo donation to their child. Studies of families formed through reproductive donation have reported that intentions to disclose do not always relate to actual disclosure to the child (23) and thus it is important to follow up families to understand not only what has been told to the child, but what has been understood by them (25). The low rates of disclosure amongst embryo donation families in the UK study also contrast with the studies of recipients in New Zealand and USA where recipients saw disclosure and access to genetic information as important (14, 18). It is possible that disclosure rates are also likely to differ based on the framing of embryo donation in different contexts as well as over time as professional guidance around disclosure changes and moves towards encouraging openness with the child about their method of conception (26).

Conclusion

Existing empirical work has suggested that donors and recipients may conceptualize and experience embryo donation differently according to the varied legal and counselling frameworks within which the process is undertaken (10). As a result, findings from one country are unlikely to be generalisable to donors and recipients in a different country. Indeed, it is possible that variation may be found within countries at a state, or even clinic, level. All the research conducted so far has been very limited in terms of sample size, sample demographic characteristics, and the age range of the children included.

Embryo donation raises unique challenges that are not present in gamete donation alone. That children who are full genetic siblings are raised in different households poses the question of how the children will feel about this. For the child who is raised by their genetic parents, how do they feel knowing that they have a full sibling being brought up in a different household, by different parents? and for the child born following embryo donation, how will they feel about being relinquished by their genetic parents? For the moment, the answers to these questions remain unknown.

The prevalence of embryo donation is increasing globally, a direct consequence of the substantial increase in IVF procedures seen in many countries across the world. That little research has been conducted on this phenomenon is therefore not only surprising, but

also a serious concern. Embryo donation can raise clear moral and ethical dilemmas for counsellors and psychologists (2), yet these professionals have very little empirical evidence to guide them. Indeed, a survey of over 700 healthcare professionals in Sweden found that around half believed that they had insufficient knowledge to be able to provide adequate care to embryo donation families (27). Research will also enable policy and practice around this issue to be better informed, although as Millbank et al., (2017) assert, these legal frameworks need to be flexible to reflect the different ways in which patients can view their embryo and the potential relationships they wish to have with the recipients and child.

Research conducted so far on parenting and child adjustment has found that embryo donation families may be similar to families created through other forms of assisted reproduction, at least until the child reaches middle childhood. However, it will be important to conduct studies on how these children fare as they grow older and begin to understand the details of their conception and birth. Including children's perspectives in future research is also, therefore, crucial.

A further area of importance in the future will be to better understand how cross-border reproduction affects the practice of embryo donation, and the consequences for the child. The cross-border reproductive care industry in the USA alone provides fertility treatments to patients from almost 150 countries (28). In the case of cross-border embryo donation, this would mean that full siblings may be being raised in different countries which may differ in culture, language and attitudes to reproductive donation. Cross-border reproduction also means that couples seeking IVF abroad have to understand the laws and practices of the country they visit, not only whilst receiving care but also once treatment has been completed and decisions about surplus embryos need to be made. For patients who fail to respond to requests about what to do with their surplus embryos it may be possible that embryos are donated to other couples without their explicit consent, as has been reported to occur in Spain (29). This practice is likely to have serious implications for the patients, the child and the parents who raise them.

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