


# Positioning the donor in a new landscape—mothers' and fathers' experiences as their adult children obtained information about the identity-release sperm donor

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**STUDY QUESTION:** How do heterosexual parents experience identity-release donation when adult children have obtained information about their sperm donor?

**SUMMARY ANSWER:** Adult offspring's receipt of identifying information about the sperm donor challenged the fathers' role as a parent, which was reflected in how parents positioned the donor in relation to the family.

**WHAT IS KNOWN ALREADY:** An increasing number of countries provide access to treatment with identity-release or 'open-identity' donors. However, there is limited knowledge about how parents experience and manage the situation when adult offspring obtain identifying information about the donor and may even establish contact with him.

**STUDY DESIGN, SIZE, DURATION:** This qualitative interview study included 23 parents whose offspring had obtained information about their sperm donor. Interviews were conducted from October 2018 to January 2019.

**PARTICIPANTS/MATERIALS, SETTING, METHODS:** A purposive sample of parents (15 mothers and 8 fathers) was recruited via adult offspring, who had requested identifying donor information at five Swedish University hospitals. All participating parents were part of a heterosexual couple who had conceived with sperm from an identity-release donor. Individual semi-structured interviews were conducted face-to face or via telephone, and transcribed audio recordings were analyzed using reflexive thematic analysis.

**MAIN RESULTS AND THE ROLE OF CHANCE:** The parents expressed diverse experiences related to their parenthood and the presence of the donor after offspring had obtained information about him; these were described in two themes. The theme 'Navigating (in)visible markers of parenthood' describes parenthood as embedded with dichotomous meanings of nature and nurture that parents navigated in relation to social approval. The theme 'Positioning the donor in a new landscape' describes how parents managed the presence of the donor by positioning him at a distance or acknowledging him as a person or even as part of the family, while some struggled to position him, giving rise to ambivalent feelings. The absence of genetic connectedness challenged the father's role as parent, which was reflected in parents' positioning of the donor.

**LIMITATIONS, REASONS FOR CAUTION:** The study was performed within the context of the Swedish legislation on identity-release donation and is based on experiences of heterosexual couples who had used sperm donation and had informed their offspring about their donor conception. This, together with the fact that parents' accounts were predominantly represented by mothers, must be taken into consideration regarding transferability to other populations.

**WIDER IMPLICATIONS OF THE FINDINGS:** Negotiations of social and genetic parenthood are still present among parents many years after treatment and may resurface when adult offspring obtain the donor's identity. Access of the adult offspring to identifying information about the donor may have unexpected consequences for family relations, including expanding the family to include the donor. Challenges related to male infertility and family dynamics indicate that parents should have access to counseling and support to manage family life with varying genetic linkage within and outside the family unit.

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## Introduction

Donor conception creates families with varying genetic links within the family unit, and where the child will have genetic ties to the donor and to individuals who share the same donor. While donor conceived (DC) individuals have been reported to desire information about their donor and same-donor offspring (Scheib et al., 2005; Jadva et al., 2010; Beeson et al., 2011; Scheib et al., 2017; Bos et al., 2019; Indekeu et al., 2021), studies are often based on self-selected groups that actively searched for such information and it is unknown to which extent these results reflect the views of the whole population of DC individuals (Zadeh, 2016; Skoog Svanberg et al., 2019).

DC individuals following anonymous donation may find and establish contact with same-donor offspring and/or the donor by using matching services such as the Donor Sibling Registry, with a majority reporting contact as a positive experience (Jadva et al., 2010). Learning the identity of the donor and same-donor offspring has sometimes been described as a redefining moment in terms of personal identity, and interacting with newly found genetic kin could extend the support network and reinforce belongingness (Blyth et al., 2012; Scheib et al., 2020). Negative experiences related to identifying or contacting the donor or same-donor offspring include emotional strain involved when meeting persons who are genetically close and yet 'total strangers', as well as conflicted feelings and discomfort due to mismatched expectations of relationships (Jadva et al., 2010; Beeson et al., 2011; Blyth, 2012; Frith et al., 2018; Koh et al., 2020; Scheib et al., 2020; Indekeu et al., 2021).

Experiences of contact with the donor or same-donor offspring have to a lesser degree been reported from the perspective of parents of DC offspring, and studies predominantly concern single mothers and same-sex female couples with young children who had actively established contact with the donor or other families who shared the same donor (Scheib and Ruby, 2008; Freeman et al., 2009; Goldberg and Scheib, 2016). These parent groups reported contact with the donor as being a moderately to very positive experience, and the role of the donor varied from merely a donor to being described as a father. Contact with other families was overall described in positive terms, but some parents reported difficulties due to differing opinions about the level of openness about the child's origin and frequency of contact, as well as ambiguous relationships with parents of offspring from the same donor.

While treatment with anonymous donors has been the norm, programs using oocytes/sperm from open-identity donors are available in an increasing number of countries and jurisdictions (Glennon, 2016). Identifying information about the donor is generally restricted to DC individuals who have reached mature age, and is released upon formal

request to the clinic or a central registry. Research about how parents and offspring, following identity-release donation, experience and manage the situation of obtaining identifying donor information is limited, partly because this type of donation has not been available for an extended period of time in most countries. One exception is the work by Scheib and co-workers based on recipients at a US sperm bank that has provided identity-release donation to single women, same-sex female couples and heterosexual couples since 1983. In families with DC adolescents, the majority of offspring planned to obtain the identity of the donor (Scheib et al., 2005) and most parents expressed positive feelings about the child's possibility of meeting the donor (Scheib et al., 2003). About a third of eligible DC offspring had requested their sperm donor's identity, and most planned to contact him (Scheib et al., 2017). In a longitudinal US study of lesbian-parent families, one third of adult offspring had met their open-identity donor and typically characterized him as an 'acquaintance' (Koh et al., 2020).

While families created with the assistance of third-party reproduction have been found to be well-functioning overall (Golombok, 2020), family compositions with varying genetic links within and outside the family unit can challenge beliefs like genetic connectedness being an essential basis of family bonds (Nordqvist, 2010; Wyverkens et al., 2015). Lacking a genetic link to offspring may imply a particular challenge for a man since fertility and fatherhood are central to a man's gender identity (Wischmann and Thorn, 2013).

Taken together, there is limited knowledge about how families following identity-release gamete donation experience and manage the situation when adult offspring obtain identifying information about the donor and even may establish contact. Previous research about how parents view the role of the donor has predominantly included single mothers and same-sex female couples following sperm donation, while the perspective of heterosexual parents is mostly lacking. Thus, the present study aims to explore heterosexual parents' experiences of parenthood following identity-release sperm donation when adult offspring have obtained information about the donor.

## Materials and methods

The study was conducted in the context of the Swedish legislation enacted in 1985. The law gave donor-conceived offspring (at mature age) the right to obtain the identity of the donor, and further mandated that donor insemination (DI) be performed at University hospitals and permitted only to heterosexual couples. Later legislative changes made IVF-treatment with donor oocytes or sperm available to

heterosexual couples (2003), and made sperm donation treatment available to lesbian couples (2005) and to single women (2016). By 2019, when more than 700 offspring (following DI to heterosexual couples) had reached adult age and were eligible to receive donor information, the number of requests was low (Lampic, 2019).

## Recruitment

Recruitment of parents was based on a multi-center study of DC individuals who had requested information about their donor at any of the Swedish University hospitals (data will be presented elsewhere). For the present sub-study, a purposive sample of the parents of these individuals was approached. Of the 25 DC individuals (age 18–29) who were informed about the present study, 22 gave permission to contact their parents, and the remaining three declined due to not wanting to upset the father or not being in contact with the father, or did not respond. Recruitment of parents and subsequent interviews were conducted between October 2018 and January 2019 until the study population had a diverse socioeconomic background, was represented in both urban and rural areas throughout Sweden, and when the data had a richness and complexity that could address the research aim (Braun and Clarke, 2019). Since the offspring who provided contact information to their parents included several sibling pairs, the total number of eligible parents was 32, including 29 who were approached regarding study participation. A total of 23 parents accepted participation, while five fathers and one mother declined or did not respond.

## Characteristics of study participants

The 23 participants included both parents from eight heterosexual couples and seven mothers (all of whom had undergone donor insemination more than 18 years ago), representing a total of 15 families. Fifteen of the 23 participants were still married to the other parent of the DC child, and remaining 8 were in a new partner relationship or were single. Participants were between 50 and 64 years of age with a wide variety of educational backgrounds and professions. Most participants had two children conceived with donor sperm, of whom at least one adult child had requested donor information. Apart from one child who was still waiting for identifying information, all had received the donor's name and personal identity number. According to the parents' accounts, the extent to which their adult children intended to or had initiated contact with the donor varied. While a few offspring only wanted to know who the donor was, many were interested in but somewhat hesitant about contacting the donor. Among the offspring who had been in contact with the sperm donor, a few were regularly meeting with him and/or his family.

## Data collection

Interviews with parents were performed face-to-face or via telephone by two of the authors (A.W. and S.I.) with training in interview techniques. Interviews were conducted individually to enable free expression of thoughts and emotions without risk of upsetting a partner (Wyverkens et al., 2017). An interview guide was developed based on research and clinical experience, and covered the participants' thoughts and feelings in relation to having used sperm donation treatment, talking with their child about the donor-conception, their adult

child's searching and obtaining information about the donor, and contact with the donor. Interviews were semi-structured, using open questions and probing follow-up questions, and lasted an average of 60 min. The study was approved by the Regional Ethical Review Board in Stockholm (2015/1465-31/5; 2016/1325-32; 2017/2370-32).

## Data analysis

The interviews were transcribed verbatim, including non-verbal communication like pauses and expression of emotions. Interviews were analyzed using reflexive thematic analysis, acknowledging that codes and themes are constructed actively by the researcher and emphasizing that subjectivity is a resource (Braun and Clarke, 2006, 2019). A complete coding was conducted, by which the entire dataset was coded inductively based on the semantic meaning of the data, with each code representing a singular idea relevant to the research aim (Braun and Clarke, 2013; Terry et al., 2017). To make the analysis nuanced and reflective, the codes and themes were developed based on repeated engagement with the data by the first author, and further elaborated in discussions between three of the authors (A.W., S.I. and C.L.) with different professional backgrounds (registered nurse, psychologists). These authors had varying gendered experiences of fertility and parenthood and in-depth knowledge of experiences of heterosexual-couple families following sperm donation. Sub-themes were constructed inductively based on the codes, aiming to cluster patterns and capture underlying ideas around an organizing concept. Themes aimed to capture latent meanings of sub-themes using an interpretative lens (Braun and Clarke, 2019, 2021). Representative quotes from the interviews were translated from Swedish into English by a professional translator and checked for accuracy by two of the authors. In the Results section, the participant's parental role and individual study number are reported after each quote (e.g. 'Mother 5').

## Results

How parents experienced their parenthood and the role of the sperm donor as their adult children had obtained donor information is described by two themes and five sub-themes (see Table 1). The first theme, 'Navigating (in)visible markers of parenthood' describes parents' varying constructs of parenthood, i.e. which markers parents considered constituting being a parent. The second theme, 'Positioning the donor in a new landscape' describes how the parents handled the role of the identity-release donor in relation to themselves and the family.

### Navigating (in)visible markers of parenthood

The theme 'Navigating (in)visible markers of parenthood' includes two sub-themes and describes how the parents experienced and reflected about parenthood from a long-term perspective of having used sperm donation treatment and now having adult offspring.

#### *Parenthood as doing/being*

Subtheme one illustrates that parents navigate less visible, but highly personal, markers of parenthood embedded with dichotomous meanings of nurture and nature. Parents expressed that 'doing' parenthood,

**Table 1** Parents' experiences of parenthood and the role of the sperm donor, with main themes and corresponding sub-themes.

Navigating (in)visible markers of parenthood	Positioning the donor in a new landscape
Parenthood as doing/being	Keeping donor at distance
Resemblance as an asset/liability	Acknowledging the donor as person/family
	Struggling with ambivalence

i.e. being present from the start of fertility treatment throughout the child's life, made parenthood self-evident. This was further elaborated on in terms of child-rearing and affectional bonds. For example, one father expressed 'doing' parenthood as a conscious decision to create an affectional bond with his child in consideration of his position as a non-genetic parent:

*'I have done everything to be an incredibly active and connected father since she [the daughter] was a little girl. I was on parental leave with her a lot [...] and I believe that it has meant a lot, for us, for our relationship... that it was extra important for me, to get close to her somehow [...] It's important to make an impression that makes it... to enable you to see yourself reflected in your children'.* (Father 26)

However, the role of a parent could be legitimized (or challenged) by the presence (or absence) of genetic relatedness. Mothers expressed that the genetic link with their children made 'being' the parent indisputable, reflecting a similar rhetoric of parenthood as self-evident through active engagement, but based on a somewhat contradictory logic. Being pregnant and carrying the child was also mentioned as strengthening the sensation of being the parent. In contrast, fathers conveyed a sense of fatherhood and masculinity being challenged by the inability to reproduce, e.g. one father explained that he wasn't really the father of his children, and another referred to himself as 'a gelding' (i.e. a castrated horse). Both parents, but particularly the mothers, described that the father had worried about no longer being considered the father if the child(ren) knew about the conception with donor sperm. One father tried to explain his thoughts and feelings about his child obtaining information about their donor:

*'It, it's something sinister and dark that I, that I don't want to touch. [...] It's still... about an ancient conception of what a father should be and that it's threatening to the fatherhood and to the role of the male in the family'.* (Father 17)

#### Resemblance as an asset/liability

The subtheme 'Resemblance as an asset/liability' concerns the role of parent-child resemblance in terms of physical attributes and traits/behavior. Resemblance between parents and offspring could be experienced as an asset or a liability, as any resemblance (or lack thereof) between father and offspring could conceal (or reveal) the absence of a genetic link. Physical resemblance between father and child was seen as an asset when it concealed the absence of a genetic link. For example, one father mentioned:

*'But even people close to you, they said, like 'well look at that, he looks so much like you' [...] yeah, but that felt good, I guess... then I didn't have to say anything'.* (Father 19)

In contrast, a lack of physical or behavioral resemblance between parent and child could evoke questions about the child's background, and be experienced as a liability by revealing the absence of a genetic bond. One mother mentioned an unsettling situation when a family friend questioned how the father and the child could be related considering they were so different. Thus, subtheme two illustrates how visible markers, i.e. resemblance, are navigated in relation to social approval of (non)genetic parenthood.

#### Positioning the donor in a new landscape

The second theme 'Positioning the donor in a new landscape' includes three sub-themes that describe parents' different ways to manage the presence of the donor, brought to the fore by the offspring's searching and receiving information about him.

##### Keeping donor at distance

The first subtheme 'Keeping donor at distance' covers constructions of the donor that positioned him as clearly separated from the family. These constructs existed on a continuum, from the donor being virtually non-existent and irrelevant in the minds of the parents, to someone of potential interest to the offspring but of no relevance to the parents themselves. The donor's 'unavoidable' presence in the family, as a result of the offspring's decision to obtain information about him, was primarily handled by the mothers.

Some parents stated that they had never thought about the donor or mentioned him within the family, mostly because their family had felt completely 'normal'. The donor was described in a depersonalizing and anonymizing manner, merely in terms of the sperm needed to conceive.

*'I believe I thought that, eh, eh, this was convenient. She was pregnant with functional sperm. And then that worked and then we were still their parents, but from another perspective. But, since we [...] also kept it secret, [we] were a very ordinary family with two kids'.* (Father 21)

Other parents acknowledged the donor as an individual, but emphasized that he had, and should have, no role in the family. They argued that donating sperm is an altruistic act without any personal gain, and therefore does not imply any reciprocal relationship.

Some parents did encourage and support their offspring on their journey to obtain donor information, while simultaneously keeping the donor at a distance. For example, one mother explained that she was not curious about the donor and only saw him as sperm, but that she actively supported her offspring in finding out who the donor was. Similarly, one father stated that the donor only concerns his offspring and that this has nothing to do with him. Several fathers kept a firm

distance not only to the donor, but also to any conversations about him within the family. For example, fathers stated that they did not know why their offspring wanted to have any information about the donor or what they had learned about him, as these topics were discussed between mother and child. The father's distancing approach to issues regarding the donor as a person could be unexpected, particularly when the donor conception had not previously been an overly sensitive topic in the family. For example, one mother was surprised when her husband plainly declined to take part of any information about the donor that their child had received at the clinic, and interpreted this as an effort to protect himself from the perceived threat to his position as a father.

*'There were no problems at all [...] before [the child] wanted to find out. Then everything was exposed and I understood that it was like tearing open a wound [...], because neither I nor the children were prepared for that reaction. [...] And then when we arrived back home it was like [...] 'Did you find out what you wanted to know?' 'Good, that's all I need to know'. He didn't want to know anything else. And in a way that is his manner of coping with it [...] that it became a competitor'. (Mother 22)*

### Acknowledging the donor as person/family

The second subtheme 'Acknowledging the donor as person/family' covers constructions of the donor as a person of relevance for the offspring and/or the family. Some parents talked about the donor in a way that acknowledged him as an individual in his own right, with attributes that gave the donor personal characteristics. For example, one father stated that the donor seemed like a sympathetic and down-to-earth person when being shown a photograph of the donor by his adult child. In terms of the donor's role for the offspring, mothers ascribed the donor a biopsychosocial role for their child/children, interpreting the offspring's physical features (e.g. hair and body type) or character as stemming from the donor. For example, a mother described how everything about her child's personality 'fell into place' when she read a letter from the donor. For some mothers, the donor was also considered to have a social role for the offspring: 'Yeah well, they do have a very comfortable relationship, get together and so' (Mother 1).

Whereas both mothers and fathers acknowledged the donor as a person, redrawing the landscape in terms of family bonds by positioning the donor as a part of the family was solely conducted by the mothers, particularly in families where the father was absent through divorce or death. Several mothers referred to the donor as 'dad' and to his children as 'siblings' to their child, and stated that contact with the donor made it feel like the family had grown. In families with a present father, it was simultaneously acknowledged that the real father was the husband.

*'Great! It feels like the family has become larger [...] partly because they got to know who the donor was... who... the biological dad, and also, that they got new siblings as part of the bargain... that was just like a bonus... Yeah well, of course you are, are interested in... curious about your background, really. Because it was a completely different person than the one they believed... well... yeah well, than [the father]. Of course, it's him that they consider to be their dad, and still do of course. But... now one can say that they have a connection to their roots'. (Mother 19)*

Some mothers, who had met the donor on several occasions, talked about him in terms that indicated a parental relationship between themselves and the donor. For example, one mother said that she had

given birth to the donor's child, thus, creating a narrative of donor conception as a shared experience between the mother and the donor. A similar statement suggesting new family bonds was given by a mother whose adult child just had a baby; 'so now we've become grandparents [laughs]' (Mother, 5).

### Struggling with ambivalence

The subtheme 'Struggling with ambivalence' covers parents' ambivalent feelings concerning the donor and his role, which particularly transpired as their child obtained donor information or when the parents got to see the donor.

Several parents seemed to struggle with how to position the donor in relation to the offspring and the family. For example, both mothers and fathers alternated between calling the donor 'father' and 'donor'. A father saw his adult child's decision to obtain information about the donor as being about wanting facts. When asked 'what kind of facts?', he answered:

*'Well, who, who is my, my biological, uhm, dad, or father, biological father or whatever you call it. Not dad, that's the wrong word. Biological donor. It's not a dad, it's a donor. So, it has nothing to do with family'. (Father 29)*

When seeing the donor, in real life or in a photograph, resemblance between the donor and the offspring could accentuate their genetic link and create ambivalence regarding his role. A mother described how her adult child showed her a photograph of the donor:

*'And then he says 'this is my, actually this is my biological father'. And then I said 'oh my God!'. At that moment it did actually sound somewhat strange. That I was sitting there looking at a man that was... yes, he is the father of my child. But yet, he is not, and it's still someone whom I have never met before [...] the feeling was, like, God, how can I... approach this. So, it was really awkward'. (Mother 25).*

Such ambivalence concerning the donor's relation to the mother and her child could also transpire in connection with meeting the donor. This was illustrated by a mother's account of meeting her two children's donors and their respective families for the first time:

*'Both their families have been here for dinner and we've had a look at each other [laughs]. It feels... it's a weird situation [laughs] sometimes. [...] Yeah well... well, it has been really nice. But it's like... the first time you meet and you really check each other out. What does he look like, and he sees me, and what I look like [laughs]. And that's what it's like and... of course it's a very [laughs] special situation'. (Mother 7)*

## Discussion

Within the context of identity-release sperm donation, the present study aimed to explore heterosexual parents' experiences as their adult children had obtained information about the donor. Mothers' and fathers' experiences were described in two themes illustrating how they navigated (in)-visible markers of parenthood, which was related to their positioning of the donor as he emerged in family life.

Parents' negotiations of the meanings of nature and nurture were found to manifest in contradictions as parenthood was viewed as 'doing', while genes could still legitimize or challenge 'being' a parent up to 30 years after donation treatment. These findings are in line with research of families with younger donor-conceived children, where engaging in parenting and relations with the child was perceived as

important to strengthen the position of the parent (Indekeu et al., 2014; Nordqvist and Smart, 2014), while genetic connections were rendered meaningful in everyday family life (Nordqvist, 2017). Not having a genetic link with the offspring challenged the sense of fatherhood among some fathers in our study, as has also been previously reported (Scheib et al., 2003; Wyverkens et al., 2017). Our findings indicate that parents regarded resemblance between the child and the father as an asset, as this could conceal the absence of a genetic link to people outside the family. This is in line with previous findings that the importance ascribed to genes, e.g. via resemblance talk, is strongly influenced by the social environment as parents try to normalize and legitimize their family (Wyverkens et al., 2015).

In everyday life, people try to move from troubled to less troubled positions (Wetherell, 1998), which can lead to contradictions in how people act or speak (Davies and Harré, 1990), since what is considered troubling or untroubling depends on the specific context the person is in (Magnusson and Marecek, 2012). In the context of sperm donation, a mother who defines parenthood as 'doing' can, if this concept of parenthood is challenged, move to a less troubling position by referring to her genetic link to the child, while this option is not available to the father. These contrasting positions of mothers and fathers are partly reflected in how participating parents positioned the sperm donor. Fathers appeared to hold the donor at a distance; e.g. by withdrawing from family conversations about the donor, suggesting the donor is a threat to fatherhood. This is in line with previous results of fathers being less positive towards the prospect of offspring obtaining information about the sperm donor (Scheib et al., 2003) and being less supportive of their children's curiosity about the donor (Beeson et al., 2011) in comparison to mothers. The adult child's identification of the sperm donor may be a particularly stressful situation for the father, since the emergence of the donor may trigger unresolved grief related to his infertility, and concerns about his role as a father. While it has been suggested that parents' anxiety related to the lack of genetic ties tends to decrease after birth as confidence about the importance of socialization increases (Indekeu et al., 2014), the present results indicate that such worries can remain or resurface after many years.

Our findings indicate that the mothers were attuned to the fathers' sensitivity and attempted various ways to support and safeguard the position of the husband. This is in line with previous results of how heterosexual parents made disclosure decisions by balancing the child's right to know against the father's vulnerable position (Lycett et al., 2005; Shehab et al., 2008). The mothers in the present study did not feel threatened by the donor, but seeing him in a photo or meeting him could raise conflicting emotions and questions about his role in relation to the child, themselves and the father. Genetic ties, manifested through resemblance, establish an indisputable relationship between the child and the donor, prior to any personal relationship that may have been formed. This relationship appeared to be embedded with connotations of parenthood although the role of the father was already occupied. Nevertheless, mothers' views of the donor and their accounts from meetings with the donor were predominantly positive. In families where the father was absent, e.g. by divorce or death, mothers appeared to position the donor even closer to the child, and also close to themselves. This suggests that family composition may have an influence on the positioning of the donor. The present findings are in line with a meta-ethnographic review (Wyverkens et al., 2015) indicating that sperm-receiving heterosexual couples downplay the

importance of the donor to a larger extent than families without a father present. However, other studies have shown that single mothers' and same-sex female couples' representations of the donor may vary from symbolically significant to an absent figure of no relevance to family life (Nordqvist, 2010; Zadeh et al., 2016).

Parents' positioning of the donor may also be related to gendered perspectives of infertility (Wischmann and Thom, 2013) and the perceived importance of the genetic parent-child bond (Svanberg et al., 2003; Isaksson et al., 2011). Women who conceive with donor oocytes lack a genetic link to the child, but the biological bond through pregnancy has been reported to help mothers feel that the child was their own (Imrie et al., 2020). Future research focusing on the long-term perspectives of parents following oocyte donation may increase our understanding of the role of the donor in relation to gender and infertility.

The present findings indicate that adult children's search for donor information constitutes a challenging situation for some parents, as emotions related to infertility and parenthood may (re)surface. Irrespective of how parents in the present study positioned the donor, they expressed a desire to act in accordance with their child's best interest, which is in line with previous results (Wyverkens et al., 2015). However, when family members' interests concerning the donor diverged, this could entail a difficult balancing act.

While identity-release donors accept that their identity will be released to adult offspring on request, donors are under no obligation to engage in any contact with offspring from their donation. In the few available studies of adults with identity-release sperm donors, offspring were upset and disappointed when their donor was not open to contact (Scheib et al., 2017) and some reported conflicting feelings and mismatched expectations (Koh et al., 2020). As offspring typically request information about their donor relatively soon after reaching 18 years of age, parents need to be prepared to support their adult child. This may involve discussing expectations regarding type and level of contact, boundaries and potential mismatch in desire for contact between the child and the donor (Zadeh, 2016). Parents themselves may also need support with questions and concerns that may arise about what contact with the donor may entail for their family. In view of limitations of current psychosocial support for recipients of donor gametes (Visser et al., 2016; Crawshaw and Daniels, 2019), a psycho-educational approach with a life-long focus may be helpful to prepare and support donor-conceived families (Crawshaw and Daniels, 2019).

The present study is based on a heterogeneous group of parents with varying socioeconomic and relationship status, but the relatively small number of participating fathers is a limitation. It should also be considered that parents' experiences were expressed within the context of the Swedish legislation on identity-release donation, and that all parents had actively told their child about the donor conception. In families where offspring become aware of their donor conception in other ways, e.g. through direct-to-consumer DNA-testing, the experience of obtaining donor information may be different for both offspring and parents.

## Conclusions

Among heterosexual couples who used sperm donation to build a family, negotiations of the meaning of social and genetic parenthood are still present many years after treatment, or may resurface in connection with

their adult children obtaining the donor's identity. The present findings highlight the vulnerable position of fathers following sperm donation treatment, which may reflect specific challenges related to male infertility. When adult offspring obtain identifying information about the donor, this may have unexpected consequences for family relations, including expanding the family to include the donor. Therefore, parents following gamete donation may benefit from counselling and support to manage family life with varying genetic linkage within and outside the family unit. Such support should be made available to families in the years after leaving the clinic, to help them with the specific emotional and relational challenges that may arise as their children grow up and might consider obtaining the donor's identity.

## Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

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The authors are grateful to all participants who took part in the study.

## Authors' roles

C.L., G.S. and A.S.S. conceived the study design. A.W., S.I. and C.L. conducted the data collection and performed the data analysis. All authors contributed to the interpretation of results and revision of the manuscript, and approved the final manuscript.

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## Conflict of interest

The authors have no conflict of interest to declare.

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