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ARTICLE

Sperm donor regulation and disclosure intentions: Results from a nationwide multi-centre study in France

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Nikos Kalampalakis is Professor of Social Psychology at the University of Lyon 2, France. His work on social representations deals with symbolic practices of kinship and gifting in medical procreation.

Abstract Gamete donation in Europe is not regulated by a common legal framework. Different laws regarding donor anonymity and remuneration exist in different countries. In France, gamete donation is characterized by a stable legal framework – the existing system of anonymous and non-remunerated donation remained unchanged following a period of public and parliamentary debate in 2011 – but little evidence is available concerning recipients' views and experiences of gamete donation. This article describes findings from a questionnaire completed individually by 714 heterosexual couple members undergoing a donor conception procedure at one of 20 national fertility centres in France. Participants were invited to report their attitudes towards the French legal framework, their perceptions of the anonymous donor, and their intentions to disclose donor conception to their child and to other people. The majority of respondents (93%) approved of the current legal framework. Participants indicated that they thought about the sperm donor in ways that emphasized his act of donation without describing him as a specific individual. A majority (71%) also stated that they intended to tell their child about their donor conception. Given that this is the largest nationwide study of French recipients of donor sperm, the findings make an important contribution to the research evidence currently available about prospective parents' perspectives in the increasingly uncommon context of donor anonymity in Europe.

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KEYWORDS: anonymity, assisted reproduction, disclosure, France, sperm donation

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Introduction

Over the last 40 years, the legal landscape of gamete donation has changed significantly, such that in Sweden, Germany, Austria, the UK, the Netherlands, Switzerland and Finland, identifiable sperm and egg donation is now mandatory (Glennon, 2016). Such legal changes have been accompanied by much public and political debate about children's right to know their origins (Appleby, 2016; Freeman, 2015; Frith, 2015; Harper et al., 2016; Pennings, 2015; Ravelingien et al., 2015; Turkmendag, 2012; Zadeh, 2016). However, in Europe, despite the fact that many common legislative and regulatory frameworks exist, there is no common law regarding assisted reproduction. As such, a plurality of polarized policies on gamete donation can be identified. In some countries, such as Italy, all forms of gamete donation are illegal, while in others, such as Spain, it is possible to access fertility treatment using donor gametes irrespective of marital status or sexual orientation (Glennon, 2016). Moreover, the practice of gamete donation is differentially organized, such that in some countries, such as France, fertility treatment is subsumed under public health care, while in others, such as the UK, it remains largely privately funded.

The situation in France is of interest because legislative changes leading to donor identifiability that have taken place in other countries have not occurred there, and because of the way in which gamete donation has been organized over time. Since 1973, French fertility centres have been organized in a national network embedded within public healthcare provision [French Federation of CECOS (FFC)], and regulated by French bioethics law (L. 2011-814 passed on 7 July 2011). Despite a comprehensive legal review in 2011, social and political challenges to donor anonymity (CCNE, 2008; Claeys and Vialatte, 2008; Théry, 2010), and citizen forums organized for this purpose (Graf, 2009), the parliamentary vote maintained the *status quo* regarding donor anonymity and non-remuneration, as well as the restriction of access to treatment to heterosexual couples alone (Leonetti, 2011). While there may be some variation, information provided to prospective parents about donors is limited, and generally includes information about basic phenotype alone.

Despite the general transition to donor identifiability, both in countries within Europe and beyond, the only piece of legislation that mandates state-led disclosure of donor conception is the Children and Family Relationships Act (2015), which has recently come into effect in Ireland. Despite the limited legislature, much research has focused on the question of the relationship between the anonymity or identifiability of the donor, and patterns of parents' disclosure to their children. Some studies have found higher rates of disclosure or intentions to disclose amongst prospective parents (Brewaeys et al., 2005; Crawshaw, 2008; Godman et al., 2006; Greenfeld et al., 1998; Isaksson et al., 2011) and actual parents (Lalos et al., 2007; Scheib et al., 2003) who received gametes from identifiable sperm or egg donors. However, other research has not substantiated this (Baetens et al., 2000; Greenfeld and Klock, 2004; Kalampalikis et al., 2013). Studies of parents' disclosure practices following the introduction of

identifiable donation in Sweden found both no evidence (Gottlieb et al., 2000) and substantial evidence (Isaksson et al., 2012) that parents using identifiable donors were more likely to disclose. In the UK, no significant increase in the rate of disclosure has been shown following the introduction of legislation mandating identifiable donation in 2005 (Freeman et al., 2016). In Finland, a large retrospective study of 58% of all offspring conceived using sperm donation since 1990 indicated that the parents of offspring born since 2000 were more likely to disclose to their children than the parents of offspring born before this date (Sälevaara et al., 2013). However, legislative moves towards donor identifiability in Finland did not occur until 2007. A review of the factors that might contribute to parents' decision-making about disclosure in the studies conducted over the last 30 years concluded that the impact of legislation on parents' disclosure decisions is unclear (Indekeu et al., 2013).

In qualitative studies, parents' representations of sperm donors have been shown to be characterized by ambivalence and tensions (Kirkman, 2004; Wyverkens et al., 2014; Zadeh et al., 2016). Specifically, the sperm donor may be depersonalized while simultaneously being regarded as a person (Grace et al., 2008). The way in which parents represent the donor has been shown to be unrelated to his status as anonymous or identifiable (Zadeh et al., 2016). Moreover, parents have cited both the anonymous and identifiable status of the sperm donor as a reason not to inform offspring about their donor conception. Amongst parents who have used identifiable donors, the prospect of disclosure has been described as arousing the fear that offspring could form an attachment to the donor. Amongst parents who have used anonymous donors, it has been argued that disclosure is unnecessary or may even be frustrating for offspring, who remain unable to access identifying information (Daniels et al., 1995; Golombok et al., 2006; Losos et al., 2007; Lycett et al., 2005; Sälevaara et al., 2013). It is, however, worth noting that some donor-conceived offspring do search for their anonymous donor (Beeson et al., 2011; Hertz et al., 2013; Jadva et al., 2009, 2010; Klotz, 2016; Mahlstedt et al., 2010).

This article contributes to the limited evidence about recipients of donor sperm in France. A recently published retrospective follow-up study of 105 French parents who conceived using donor sperm (Lassalzede et al., 2017) found that 38% ($n = 40$) of parents – the majority of whom had planned to tell their child before undergoing the procedure – had now told their child about their donor conception. Of those who had not yet disclosed, 65% ($n = 42$) planned to do so. Despite offering an important insight into parents' actual and intended disclosure, the study by Lassalzede et al. (2017) recruited participants from a single fertility centre, in Marseille, and did not establish parents' thoughts and feelings about the legal framework of anonymity or the anonymous donor.

This article reports findings from a large-scale, multi-centre study of disclosure intentions and perceptions of the donor amongst heterosexual couples seeking fertility treatment with donor sperm in France. Given the French context, unparalleled in other parts of Europe, this systematic study sought to elicit the views of heterosexual couples regarding the legal framework of anonymity, the anonymous donor and their disclosure intentions (Kalampalikis et al., 2010).

Materials and methods

Sample characteristics

Potential participants were invited to take part in the study during their visit to one of 20 certified fertility centres (of a total of 23) in France for a medical or counselling appointment regarding their treatment with donor sperm during two 6-month periods: April–September 2008 and September 2011–February 2012. The remaining three centres did not return any questionnaires [Kalampalikis and Doumergue, 2013](#).

Although recipients of donor gametes in France present for treatment as heterosexual couples, potential participants were invited to take part in the study on an individual basis. Potential participants were informed that completion of the questionnaire was not mandatory, and would not impact upon their subsequent treatment. During the time periods studied, an average of 1808 couples presented for treatment ([Hennebicq et al., 2010](#)). As reported in [Table 1](#), 714 participants consented to take part as individuals, 362 (51%) of whom were female and 352 (49%) of whom were male.

The average age of participants in both study periods was 31.7 years [standard deviation (SD) 7.92]. The average age of women was 30.2 years (SD 6.93), and the average age of men was 33.3 years (SD 8.55). All participants were at the preconception stage, and had been awaiting treatment for periods of between 10 and 24 months. The sociodemographic profile of participants was similar to that of the general population of French recipients of donor gametes, as identified by [Hennebicq et al. \(2010\)](#).

Questionnaire and analysis

Pilot interviews were conducted with 13 individuals who were accessing fertility treatment with donated gametes in France. Their responses, together with information from relevant published papers (e.g. [Brewayes et al., 1997](#); [Hunter et al., 2000](#); [Rumball and Adair, 1999](#); [Van Berkel et al., 1999](#)), informed the items that were included in the questionnaire. Each participant was asked to complete an anonymous questionnaire in the presence of a researcher or a professional. The questionnaire asked participants to indicate closed responses to the following: (i) preference for anonymous or identifiable donation; (ii) preference for non-remunerated or remunerated donation; (iii) perceptions of the donor; (iv) disclosure to others (excluding physicians); (v) disclosure intentions to offspring; (vi) reasons for disclosure or non-disclosure; and (vii) anticipated timing of disclosure (where applicable). For each question, participants could select more than one item; unless otherwise

specified, they were asked to indicate their response to each item on a four-point Likert scale (ranging from 1 = 'strongly disagree' to 4 = 'strongly agree'). Questionnaires were analysed using descriptive statistics to identify frequencies. For clarification, agreement rates (the number of participants who 'agreed' or 'strongly agreed' with specific items) are reported below.

We explored the effect of gender (women versus men) and time of participation (2008 and 2011–2012) on the dependent variables through separate analyses of variance (ANOVA) and chi-squared tests, with $0.01 < \eta^2 < 0.05$ and $0.10 < \text{Cramer's } V < 0.50$ considered to indicate a low to moderate effect size, respectively.

This study was approved by the ethical committee of FFC, and all ethical precautions were taken in order to respect participants' autonomy and confidentiality.

Results

Preferences concerning regulation of donation

Participants' responses to questions concerning their attitudes about gamete donation legislation are reported in [Table 2](#). Almost all respondents ($n = 658$, 93%) indicated that they agreed or strongly agreed with the existing legal principles (donor anonymity and non-remuneration). Some ($n = 259$, 38%) also agreed or strongly agreed that donor anonymity and remuneration was acceptable. A minority ($n = 82$, 12%) agreed or strongly agreed with donors being identifiable and non-remunerated. Fewer ($n = 32$, 5%) agreed or strongly agreed with identifiable and remunerated donation. No differences were found between women and men, nor between the participants who responded in 2008 and those who responded in 2011–2012 (see [Table 3](#)), for these items.

Perceptions of the donor

Participants' responses to questions concerning their perception of the donor are detailed in [Table 4](#). The majority ($n = 577$, 82%) of participants agreed or strongly agreed with the statement that the donor is 'a generous and unselfish man', and more than half ($n = 366$, 52%) agreed or strongly agreed with the statement that the donor is 'a hero who is helping without expecting something in return'. Other statements that would suggest more concrete forms of personalization (i.e. 'someone we frequently think about' and 'to some extent, someone who belongs to the family') were not met with such agreement. More than half ($n = 433$, 60%) of participants agreed or strongly agreed that the donor is 'just someone who gave spermatozoa', and 386

Table 1 Characteristics of the study participants.

	Total	Total		2008		2011–2012	
		Women	Men	Women	Men	Women	Men
<i>n</i> (%)	714 (100)	362 (50.7)	352 (49.3)	178 (49.9)	179 (50.1)	184 (51.5)	173 (48.5)
Mean age in years (SD)	31.7 (7.92)	30.2 (6.93)	33.3 (8.55)	30.5 (6.20)	29.89 (7.59)	33.51 (8.36)	33.17 (8.76)

Table 2 Preferences concerning regulation of donation, expressed as agreement rate ('agree' or 'strongly agree').

Which type of donation do you prefer?	Total	Women	Men	2008	2011–2012
Anonymous and non-remunerated	658 (93)	339 (95)	319 (92)	332 (95)	326 (92)
Anonymous and remunerated	259 (38)	135 (39)	124 (37)	94 (28)	165 (48)
Identifiable and non-remunerated	82 (12)	35 (10)	47 (14)	38 (12)	44 (13)
Identifiable and remunerated	32 (5)	13 (4)	19 (6)	7 (2)	25 (7)

Values are *n* (%).

participants (55%) agreed or strongly agreed that the donor is 'nobody in particular', indicating that more than half of the respondents viewed the donor as an unspecified person. However, fewer respondents (*n* = 209, 30%) agreed or strongly agreed with the statement that the donor is 'nobody, just a sperm straw'.

Regarding terminology used to describe the donor, the majority (*n* = 581, 83%) of participants agreed or strongly agreed with the designation 'gamete donor only'. Very few (*n* = 71, 10%) agreed or strongly agreed with the term 'natural father', and fewer still agreed or strongly agreed with 'father' (*n* = 47, 7%) or 'real father' (*n* = 28, 4%). Women agreed significantly more often than men with the idea that the donor is 'a hero who is helping without expecting something in return' [mean 2.53 (SD 1.002) for women versus 2.46 (SD 1.005) for men; $F = 2.75$; $P = 0.042$; $\eta^2 = 0.014$] (Table 5). The effect size for this significant difference was small.

Disclosure to others

A total of 513 respondents (73%) had told their family about their use of gamete donation, and 440 (62%) had discussed the topic at least once with their friends (Table 6). Among those who disclosed their pursuit of donor conception to others (*n* = 513), 128 participants (18%) reported having regretted it afterwards. In particular, women (23%) were more likely than men (13%) to indicate regret at having shared such information with others [$\chi^2 (1, n = 507) = 11.89$; $P = 0.001$; Cramer's $V = 0.131$], but again, the effect size for this significant difference was small.

Disclosure to children

Five hundred and thirty-eight participants (75%) indicated that they planned to tell their prospective child about the fertility problems they had experienced (see Table 6). Five

hundred and nine participants (71%) indicated that they had decided to disclose to their offspring that they had used donor sperm in order to conceive, while 96 participants (13%) were in favour of non-disclosure. Regarding the timing of disclosure, just over half of the participants (*n* = 400, 56%) were uncertain about when to share information about donor conception with their child. The majority (*n* = 516, 72%) of respondents indicated that they would disclose 'when it seems [to them] to be the best moment'. Two hundred and twenty-two participants (31%) anticipated that their disclosure would be 'when psychologists consider is the best moment'. More than half (*n* = 410, 57%) indicated that 'the best moment to have a conception-related discussion with the child is when he/she starts to ask about where babies come from', and in 2011–2012, 149 participants (45%) agreed with the idea that disclosure should take place at 'the earliest possible' moment. Those responding in 2011–2012 were more likely than those responding in 2008 to state that they told their friends about the donor conception process [$\chi^2 (1, n = 705) = 8.16$; $P = 0.003$; Cramer's $V = 0.107$], that they had decided to tell their child about the use of fertility treatment [$\chi^2 (1, n = 714) = 8.72$; $P = 0.002$; Cramer's $V = 0.110$], and that they had decided to tell their child about their donor conception [$\chi^2 (1, n = 714) = 13.86$; $P = 0.001$; Cramer's $V = 0.139$]. They were also less uncertain about when to do so [$\chi^2 (1, n = 714) = 12.30$; $P = 0.001$; Cramer's $V = 0.130$], and more likely to consider that the timing of disclosure would be 'when psychologists consider is the best moment' [$\chi^2 (1, n = 714) = 22.00$; $P = 0.001$; Cramer's $V = 0.175$], or driven by the child him/herself asking questions about conception [$\chi^2 (1, n = 714) = 9.157$; $P = 0.002$; Cramer's $V = 0.113$]. Again, the effect sizes for these differences were small.

Discussion

The findings of this study provide information on attitudes towards existing regulation, perceptions of the donor and

Table 3 Statistical analysis of preferences concerning regulation of donation.

Which type of donation do you prefer?	Total	Women	Men	<i>F</i>	<i>P</i> ^a	η^2	2008	2011–2012	<i>F</i>	<i>P</i> ^a	η^2
Anonymous and non-remunerated	3.59 (0.692)	3.62 (0.627)	3.55 (0.752)	–	NS	–	3.63 (0.667)	3.54 (0.714)	–	NS	–
Anonymous and remunerated	2.11 (1.015)	2.14 (1.017)	2.08 (1.014)	–	NS	–	1.89 (1.007)	2.33 (0.976)	–	NS	–
Identifiable and non-remunerated	1.55 (0.777)	1.50 (0.726)	1.59 (0.823)	–	NS	–	1.52 (0.791)	1.57 (0.763)	–	NS	–
Identifiable and remunerated	1.30 (0.579)	1.29 (0.555)	1.31 (0.603)	–	NS	–	1.23 (0.505)	1.37 (0.635)	–	NS	–

NS, not statistically significant.

Values are mean (standard deviation).

1 ≤ mean ≤ 4: strongly agree.

^a Analysis of variance calculated on original data (four-point scale).

Table 4 Attitudes towards the donor, expressed as agreement rate ('agree' or 'strongly agree').

Question	Total	Women	Men	2008	2011–2012
To you the donor is:					
A generous and unselfish man	577 (82)	303 (86)	274 (79)	276 (79)	301 (86)
A hero who is helping without expecting something in return	366 (52)	192 (54)	174 (50)	169 (48)	197 (56)
Someone we frequently think about	87 (12)	41 (12)	46 (13)	50 (14)	37 (11)
To some extent, someone who belongs to the family	72 (10)	26 (7)	46 (13)	43 (12)	29 (8)
Just someone who gave spermatozoa	433 (60)	226 (63)	207 (59)	212 (60)	221 (62)
Nobody in particular	386 (55)	181 (52)	205 (59)	194 (56)	192 (54)
Nobody, it is just a sperm straw	209 (30)	117 (33)	92 (27)	111 (32)	98 (28)
How would you name the donor?					
Gamete donor	581 (83)	308 (87)	273 (79)	289 (84)	292 (83)
Natural father	71 (10)	28 (8)	43 (13)	44 (13)	27 (8)
Father	47 (7)	18 (5)	29 (8)	22 (6)	25 (7)
Real father	28 (4)	10 (3)	18 (5)	17 (5)	11 (3)

Values are *n* (%).

disclosure intentions among 714 heterosexual couple members undergoing the process of sperm donor conception in France during two 6-month periods: April–September 2008, and September 2011–February 2012. Findings indicate that the vast majority of respondents approved of the current legal framework for sperm donation in France. It therefore seems that the political and public controversy concerning whether or not donor-conceived offspring should have a legal right to access identifying information about the donor,

which occurred during the study period, was not mirrored in participants' responses.

In a follow-up study of 44 parents of donor-conceived offspring in New Zealand (Daniels et al., 2009), more than half of the participants stated that they were supportive of the forthcoming legislation mandating donor identifiability. Although these participants were parents of children who were conceived with anonymous donations, and who were therefore unaffected by the changes to the law, Daniels

Table 5 Statistical analysis of attitudes towards the donor.

Question	Total	Women	Men	<i>F</i>	<i>P</i> ^a	η^2	2008	2011–2012	<i>F</i>	<i>P</i> ^a	η^2
To you, the donor is:											
A generous and unselfish man	3.08 (0.847)	3.17 (0.808)	2.99 (0.876)	–	NS	–	3.00 (0.883)	3.17 (0.801)	–	NS	–
A hero who is helping without expecting something in return	2.49 (1.003)	2.53 (1.002)	2.46 (1.005)	2.753	0.042	0.014	2.40 (1.003)	2.59 (0.996)	–	NS	–
Someone we frequently think about	1.62 (0.730)	1.59 (0.720)	1.66 (0.740)	–	NS	–	1.64 (0.764)	1.61 (0.696)	–	NS	–
To some extent, someone who belongs to the family	1.48 (0.702)	1.40 (0.631)	1.56 (0.761)	–	NS	–	1.49 (0.727)	1.47 (0.678)	–	NS	–
Just someone who gave spermatozoa	2.61 (0.958)	2.64 (0.946)	2.58 (0.971)	–	NS	–	2.57 (0.988)	2.65 (0.926)	–	NS	–
Nobody in particular	2.52 (0.989)	2.44 (1.003)	2.59 (0.972)	–	NS	–	2.50 (1.010)	2.53 (0.970)	–	NS	–
Nobody, it is just a sperm straw	2.11 (0.948)	2.15 (0.968)	2.08 (0.926)	–	NS	–	2.14 (1.012)	2.09 (0.879)	–	NS	–
How would you name the donor?											
Gamete donor	3.15 (0.903)	3.23 (0.845)	3.06 (0.952)	–	NS	–	3.11 (0.908)	3.18 (0.897)	–	NS	–
Natural father	1.49 (0.728)	1.41 (0.687)	1.56 (0.761)	–	NS	–	1.52 (0.767)	1.46 (0.687)	–	NS	–
Father	1.30 (0.680)	1.22 (0.593)	1.38 (0.752)	–	NS	–	1.27 (0.627)	1.32 (0.729)	–	NS	–
Real father	1.28 (0.583)	1.20 (0.514)	1.36 (0.636)	–	NS	–	1.29 (0.619)	1.27 (0.544)	–	NS	–

NS, not statistically significant.

Values are mean (standard deviation).

1 ≤ mean ≤ 4: strongly agree.

^a Analysis of variance calculated on original data (four-point scale).

Table 6 Disclosure to the child and to social circle, expressed as agreement rate and statistical analysis.

Question	Total	Women	Men	χ^2	<i>P</i>	Cramer's <i>V</i>	2008	2011–2012	χ^2	<i>P</i>	Cramer's <i>V</i>
I discussed my donor conception process with:											
My family	513 (72)	265 (73)	248 (71)	–	NS	–	245 (69)	268 (75)	–	NS	–
My friends	440 (62)	236 (66)	204 (58)	–	NS	–	200 (57)	240 (67)	8.16	0.003	0.107
I have told someone about the donor conception process, and I regret it	128 (18)	83 (23)	45 (13)	11.89	0.001	0.131	63 (19)	65 (18)	–	NS	–
Within our couple, we decided to:											
Tell the child about the fertility problems we faced	538 (75)	276 (76)	262 (74)	–	NS	–	252 (71)	286 (80)	8.72	0.002	0.110
Tell the child about his/her donor conception	509 (71)	258 (71)	251 (71)	–	NS	–	232 (65)	277 (78)	13.86	0.001	0.139
Not to tell the child	96 (13)	55 (15)	41 (12)	–	NS	–	69 (19)	27 (8)	21.10	0.001	0.172
If you want to tell your child, when will you do it?											
When it seems to us to be the best moment	516 (72)	260 (72)	256 (73)	–	NS	–	247 (69)	269 (75)	–	NS	–
We don't know exactly yet	400 (56)	214 (59)	186 (53)	–	NS	–	223 (62)	177 (50)	12.30	0.001	0.130
When psychologists consider is the best moment	222 (31)	107 (30)	115 (33)	–	NS	–	82 (23)	140 (39)	22.00	0.001	0.175
As soon as possible after his/her birth	–	82 (49)	67 (42)	–	NS	–	–	149 (45)	–	–	–
When the child starts to ask where babies come from	410 (57)	207 (57)	203 (58)	–	NS	–	185 (52)	225 (63)	9.17	0.002	0.113

NS, not statistically significant.

Values are *n* (%) unless otherwise specified.

et al. (2009) suggested that the broad support for donor information in principle, even amongst some of those parents who had not disclosed to their children at the time of follow-up, was noteworthy. For most of the participants in the present study in France, the fact that their offspring would be unable to access identifying information about the donor did not appear to be a major obstacle to parents deciding to inform them about their donor conception (see also Jouannet et al., 2010). Although expressions of intent to disclose are not the same as actual disclosure (Golombok et al., 2004; Readings et al., 2011), similar rates of actual disclosure and intent to disclose have been found in a sample of parents of sperm-donor-conceived children in France (Lassalzede et al., 2017). In the study by Lassalzede et al. (2017), rates of intent to disclose seem to be similar to those found in retrospective studies where parents have used identifiable sperm donors (Isaksson et al., 2012; Sälevaara et al., 2013). In line with the existing literature on families who have used either identifiable or anonymous donation in other parts of Europe (Indekeu et al., 2013), it seems that the French case might be one more example in which the legal status of the sperm donor does not appear to affect disclosure intentions consistently. It is worth noting that research in those contexts where identifiable donation is mandated has shown that attitudes towards information-sharing with offspring, and attitudes concerning children's access to the donor's identity, are distinct (Brewaets et al.,

2005; Isaksson et al., 2011). With regards to the French context, further qualitative research is required to establish the role of the donor's anonymous status in prospective parents' plans to tell their children about their donor conception, and in parents' actual disclosure practices.

Findings seem to suggest that the political and public controversy about donor anonymity in France did not lead to changes in recipients' views of the legal framework over time (2008 and 2011–2012). Similarly, it seems that this controversy did not lead to substantial differences between the intention of respondents in 2008 and the intention of respondents in 2011–2012 to disclose to their children. Although statistically significant results were found, the effect sizes were minimal, and must therefore be interpreted with caution. In other studies (Sälevaara et al., 2013), it has been argued that an increased rate of disclosure can be explained by significant shifts in the professional practice of counselling, which was rare previously, or otherwise advised that conception with donor gametes should remain confidential, but now often involves providing parents with information that disclosure may be in the best interests of children (Golombok, 2015). In France, a change driven by FFC health professionals and professional counselling staff – from secrecy prevalence towards greater parental openness – has been described as being in effect since the early 1990s (Brunet and Kunstmann, 2013; Lassalzede et al., 2017). However, as suggested by Daniels et al. (2009), it is likely

that professional advice is only one factor that contributes to recipients' decision-making about disclosure. As [Indekeu et al.'s \(2013\)](#) review of studies conducted over the last 30 years concluded, parents' decision-making appears to be complex, and cannot be attributed to a single factor (such as professional advice or legislation). Nevertheless, it has been suggested that societal influences may lead to perceived stigma amongst parents who have conceived using donor gametes, and that future research ought to investigate public perceptions of the families formed in this way, and their potential impact on recipients' disclosure decisions ([Indekeu et al., 2013](#)).

In terms of perceptions of the donor, participants were found to describe these men as generous people who are nevertheless irrelevant to their everyday lives and family experiences. These findings corroborate those of previous studies that identified ambivalence about the donor amongst heterosexual couples ([Grace et al., 2008](#); [Kirkman, 2004](#)). However, given that such research has also shown that feelings about the donor are likely to change over time, especially post birth ([Burr, 2009](#); [Grace et al., 2008](#); [Indekeu et al., 2014](#); [Kirkman, 2004](#)), the findings of this study raise questions about whether or not those who access fertility treatment using donor gametes in France will remain similarly ambivalent about the donor once they have children. Despite initial evidence that parents' disclosure decisions generally remain consistent before treatment and after childbirth ([Lassalzede et al., 2017](#)), their thoughts and feelings about the donor once they become parents are not yet known.

The present study offers a unique insight into a population that is rarely researched in the existing literature on gamete donation. It is worth noting that participants in the study may have provided what they perceived to be socially desirable responses, particularly given the institutional context in which they were recruited to the study. In spite of these shortcomings, given that this is the largest nationwide study of French recipients of donor sperm, the findings represent an important contribution to the research evidence currently available about disclosure in the increasingly uncommon context of donor anonymity in Europe. This study raises questions about the complexity of psychosocial issues in the area of assisted reproduction as they relate to political, professional and public spheres. Further research that explores the information-sharing strategies of recipients of donor gametes in France, and their perceptions of the legal framework and the donor following the birth of the child, is now recommended.

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