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Satisfaction with known, open-identity, or unknown sperm donors: reports from lesbian mothers of 17-year-old adolescents

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Objective: To assess whether lesbian mothers of 17-year-old adolescents conceived through donor insemination are satisfied with their choice of a known, open-identity, or unknown sperm donor and whether the mothers' satisfaction is associated with psychological health problems in the index adolescent offspring.

Design: Mixed-method study.

Setting: Not applicable.

Patient(s): One hundred twenty-nine lesbian mothers and 77 index offspring.

Intervention(s): Semistructured interviews with the mothers conducted by telephone and the State-Trait Personality Inventory (STPI) completed online by the adolescent offspring.

Main Outcome Measure(s): Satisfaction with the type of sperm donor selected was assessed through multiple choice questions, and adolescent psychological health problems by the STPI. The reasons for the mothers' (dis)satisfaction were evaluated through a thematic analysis of transcribed interviews.

Result(s): Overall, 77.5% of mothers were satisfied with the type of donor chosen. There were no significant differences between birth mothers and comothers on (dis)satisfaction. In comparing satisfied with dissatisfied birth mothers by donor type, the only significant differences were that those selecting open-identity donors were more satisfied than dissatisfied and that those using unknown donors were more dissatisfied than satisfied; (dis)satisfaction with donor type was unrelated to offspring psychological health problems. Qualitative analyses revealed six themes concerning all mothers' reasons for (dis)satisfaction.

Conclusion(s): Donor access and custody concerns were the primary themes mentioned by lesbian mothers regarding their (dis)satisfaction with the type of sperm donor they had selected. (Fertil Steril® 2015;103:242–8. ©2015 by American Society for Reproductive Medicine.)

Key Words: Lesbian mothers, donor insemination, known sperm donor, open-identity sperm donor, unknown sperm donor

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Although numerous studies have focused on the transition to parenthood in planned lesbian families (1–3), little is known about the mothers' retrospective feelings concerning the type of sperm donor selected. In the United States, lesbians who wish to become parents through donor insemination (DI) face many decisions regarding donor type (4): they may elect to use the sperm of a known donor (e.g., a friend or in-law), an open-identity donor (i.e., one who

agrees to be contacted by offspring of a certain age, typically ≥ 18 years old), or an unknown donor (i.e., one whose identity will remain concealed from the recipient and offspring) (3, 5). Whereas heterosexual couples using DI services generally choose unknown donors (6), lesbian prospective parents select donors of all three types, depending on their preferences and circumstances (1–3, 5).

The reasons lesbians lean toward known donors include: [1] a desire for the offspring to have a relationship or contact with the donor and his relatives; [2] a wish for information about the donor's biological heritage; and/or [3] a hope to maintain control over the insemination process (1, 5, 7, 8). In considering a known donor, prospective mothers deliberate over which characteristics are most important to them, such as personality, genetics, education, appearance, religion, and interests (3). The choice of a known donor may or may not be associated with a prospective lesbian mother's or couple's plan to share parenting with him (1, 3, 5).

Lesbians who select open-identity or unknown sperm donors often do so out of a desire to raise children within a planned lesbian family, without donor involvement or custody disputes (1, 3). Open-identity or unknown donors are also chosen when prospective mothers do not know a suitable candidate who is willing to donate sperm. In contrast to permanently unknown donors, open-identity donors are typically selected because prospective mothers would like the offspring to have the option of future contact with the donor (1, 2, 5).

The present report is part of an ongoing longitudinal study on planned lesbian families with first-generation offspring conceived through DI. In previous investigations regarding the index adolescent offspring, no differences were found in psychological adjustment or quality of life when those with known, open-identity, and unknown donors were compared (9–11). Also, the 17-year-old adolescents with as yet unknown donors (open-identity and unknown combined) were nearly evenly divided in stating that they did not care about the donor type or that they had no opinion about this issue (39.6% vs. 37.5%), with the remainder indicating that they regretted not knowing their donor (9). However, no prior study has examined their lesbian mothers' retrospective feelings concerning the types of sperm donors selected. The aim of the current study was to explore lesbian mothers' satisfaction with their use of a known, open-identity, or unknown sperm donor 18 years after the conception of the index offspring and to assess whether parental satisfaction with sperm donor selection was associated with psychological health problems in the adolescent offspring. A second goal was to describe the mothers' reasons for (dis)satisfaction with the type of donor chosen. This study will be of special interest to health care professionals, fertility centers, prospective DI recipients, and DI offspring in providing insight into lesbian mothers' long-term assessments of their chosen methods of conception.

MATERIALS AND METHODS

Study Design and Data Collection

During the first decade in which DI was available in the United States to lesbians who wished to become pregnant

(4), participants were recruited through a snowball method in Boston, Washington, DC, and San Francisco for the US National Longitudinal Lesbian Family Study (NLLFS) (1). Data were collected in five waves: during insemination or pregnancy (between 1986 and 1992; time 1) and when the children were 2 (time 2), 5 (time 3), 10 (time 4), and 17 years old (time 5; T5). Detailed descriptions of the study purposes, sample, and methodology are available in previous reports (1, 10). The present article is based on the T5 data collection (completed in May 2009) from 78 families (93% retention). The study protocol, consent, and assent forms were approved by the Institutional Review Board of the California Pacific Medical Center.

At T5, the birth mothers and comothers were interviewed independently after they had provided written consent. The 60- to 90-minute in-depth telephone interviews, conducted by members of NLLFS research team trained in interview methodology, were semistructured with open-ended questions. Each mother was asked to specify how the index offspring was conceived—through a known, open-identity, or unknown donor. To measure their satisfaction with the type of donor selected, the mothers were also asked, "If you had to do it all over again, would you make the same choice of donor type?" (1 = yes, 2 = no) and in a follow-up, open-ended question, to explain the reasons for their yes-or-no answer. The responses were transcribed verbatim.

After their mothers consented and the offspring assented, the State-Trait Personality Inventory (STPI) completed by the 17-year-olds was used to measure adolescent psychological health problems (12). A mean score was calculated for psychological health problems based on three 10-item STPI subscales—trait anxiety, anger, and depression. Example items are "I feel nervous and restless" (trait anxiety), "I am quick tempered" (trait anger), and "I feel gloomy" (trait depression), with answers ranging from 1 (not at all) to 4 (very much so). Cronbach's alpha for the three combined STPI subscales was 0.92.

Analyses

Two researchers (NKG and NGG) independently conducted multiple readings of all responses to the open-ended question on satisfaction with donor type to derive lists of themes. These two lists were compared to identify common themes and unique codes. A single coding list was finalized after the same two researchers reviewed all transcripts again and no new themes were identified. The final coding list was explained to and discussed with the authors HB and AD, who had already reviewed the transcripts. To increase reliability, all coders were trained by the lead author.

At the next stage, using the final coding list, the above-mentioned authors worked in pairs to double-code 23 transcripts. On average, the Krippendorff's alpha reliability for all double-coded fragments in 46 transcripts was 0.78, indicating a substantial agreement between the coders (13, 14). Any disagreement on the coding of a fragment was discussed to reach consensus on a single code to be used for the thematic content analysis. Subsequently, the remaining 85 transcripts were divided among the four researchers for coding.

The coded fragments were entered into the MAXQDA software program (15, 16) for data management and thematic content analysis (17–20). Literal citations of the mothers' responses to the open-ended question are presented in the results section. To present these findings, we applied numerical and operationally specified verbal counting as described by Sandelowski (21), in which words such as “few,” “some,” and “many” are used to define verbal counting. We use “a few” if a theme appears in more than one but fewer than four transcripts, “some” if it appears in five to 10 transcripts, “many” if it appears in more than 10 transcripts, and “most” or “a majority” if a theme appears in more than half of the transcripts pertaining to satisfaction or dissatisfaction with a particular donor type. It is important to note that generalization to larger populations should not be made from these adjectives.

RESULTS

Characteristics of the Sample

The sample size of the current study is based on the 129 lesbian mothers (72 birth mothers and 57 comothers) who replied to the T5 question, “If you had to do it all over again, would you make the same choice of donor type?” in regard to 76 pregnancies resulting in 77 index offspring (38 girls and 39 boys, including one set of twins). During pregnancy, 70 of the 76 families comprised a birth mother and a comother, and six were single-mother families. Twenty-eight offspring (36.4%) were conceived using known sperm donors, 19 (24.7%) through open-identity donors (including the twins), and 30 (39.0%) through unknown donors. The participating mothers were mostly middle class and Caucasian, residing predominantly in the northeastern or western regions of the United States (22). At T5, the mothers were on average 52.3 years old ($SD = 4.51$), and 88.9% had a college degree or higher. The average number of children per family was 1.5 (range 1–5), and 42.9% of the original couples were still together. The mean age of the index adolescent offspring was 17.05 years ($SD = 0.36$).

(Dis)satisfaction with Donor Type

Regarding donor type, 77.5% of the mothers ($n = 100$; 55 birth mothers and 45 comothers) indicated that they would make the same choice if they had it to do over again, and 22.5% ($n = 29$; 17 birth mothers and 12 comothers) said that they would not. The 100 mothers who were satisfied with their choices were roughly evenly split among those who had used known ($n = 21$ birth and 16 comothers, total 37.0%), open-identity ($n = 18$ birth and 13 comothers, total 31.0%), or unknown donors ($n = 16$ birth and 16 comothers, total 32.0%). Of the 29 mothers who were dissatisfied with their donor type, 27.6% ($n = 5$ birth and 3 comothers) had chosen a known donor, 6.9% ($n = 0$ birth and 2 comothers) an open-identity donor, and 65.5% ($n = 12$ birth and 7 comothers) an unknown donor. Since birth mothers and comothers showed no significant differences on (dis)satisfaction pertaining to donor type, $\chi^2(1, N = 129) = 0.12, P = .730$, to avoid bias by having two dependent data points within some

families, we used only birth mothers' answers to assess whether they were more satisfied or dissatisfied with their type of donor. The only significant differences that emerged were that birth mothers who had selected open-identity donors were more satisfied than dissatisfied and birth mothers who had used unknown donors were more dissatisfied than satisfied, $\chi^2(2, N = 72) = 11.59, P = .003$.

The combination of (dis)satisfaction and donor type yielded six distinct categories (1 = satisfied, known; 2 = dissatisfied, known; 3 = satisfied, open-identity; 4 = dissatisfied, open-identity; 5 = satisfied, unknown; 6 = dissatisfied, unknown). We calculated the mean score for offspring psychological health problems in each category. For the birth mothers, these psychological health problem mean scores were compared for the six categories of (dis)satisfaction regarding donor type by performing an analysis of variance with a post hoc comparison using a least significance difference test, and no significant differences were found. We did the same comparison for the comothers, and there were also no findings of significance. Because each twin had a score on psychological health problems, we conducted these analyses twice—using one twin in each set of comparisons—and the findings were the same. The overall mean score for psychological health problems in the adolescent offspring was 1.88 ($SD = 0.48$; range, 1.10–3.43, with lower scores reflecting fewer problems).

Based on the birth mothers' and comothers' responses to the open-ended question about the reasons for satisfaction or dissatisfaction with the chosen donor type, we were able to identify six themes (see Table 1). A majority of mothers provided multiple reasons for their (dis)satisfaction, thus the total number of responses in Table 1 exceeds the total number of participants. These responses are presented by theme below in association with the type of donor selected.

Known Donor

Of the mothers who were satisfied with their choice of a known donor, nearly all mentioned reasons related to the relationship between the donor and the offspring and/or mother(s). For example, “[The donor] cares for [my daughter] and is interested in her life and I'm happy with how she turned out knowing that half of her came from him” (respondent no. 11). Many mothers were pleased that the offspring had access to the donor's family, including half-siblings. “[The donor] and his wife are part of our family, and their expected baby will be part of our family,” said one such mother (respondent no. 109). Commenting on her son's access to his donor, another mother elaborated, “[My son] knows that [the donor] is his bio-father. [The donor] acts like an uncle. We spend Christmas and Thanksgiving together and see [the donor] and his partner about once a month” (respondent no. 114). When talking about a known donor, many mothers referred to him as the “father.”

Many satisfied mothers focused on the donor's intrinsic qualities that were a good fit for the family. For example, respondent no. 29 said, “[The donor] is a great person—kind, big hearted, creative, and interesting.” Many mothers stated that they were very happy with the overall outcome: “It all

TABLE 1

Themes concerning satisfaction or dissatisfaction with chosen donor type by frequency of mention.^a

Themes by donor type	Satisfaction ^b of birth/comother	Dissatisfaction ^b of birth/comother
Known donor ^c		
Offspring having access to and/or information about donor	0/0	0/0
Custody and/or parenting by a third person	10/4	0/0
Feelings about overall outcome	10/7	0/0
Donor's intrinsic qualities	13/5	1/1
Relationship between donor and offspring or mother	13/9	2/1
Options of donor types	0/0	0/0
Open-identity donor ^c		
Offspring having access to and/or information about donor	12/12	0/2
Custody and/or parenting by a third person	9/4	0/0
Feelings about overall outcome	4/2	0/0
Donor's intrinsic qualities	3/2	0/0
Relationship between donor and offspring or mother	0/0	0/0
Options of donor types	0/0	0/1
Unknown donor ^c		
Offspring having access to and/or information about donor	8/3	10/7
Custody and/or parenting by a third person	9/8	2/0
Feelings about overall outcome	9/9	0/0
Donor's intrinsic qualities	1/1	0/1
Relationship between donor and offspring or mother	0/0	0/0
Options of donor types	0/0	3/4

^a A majority of mothers provided multiple reasons for their (dis)satisfaction, thus the total number of responses exceeds the total number of participants.

^b Number of birth mothers or comothers mentioning a particular theme (birth mother n = 72; comother n = 57).

^c In two families, the known donor died when the index offspring was a child. In two families, the donor status changed when the index offspring was a child: one unknown donor became known, and an open-identity donor changed his status to permanently unknown.

Gartrell. Satisfaction with sperm donors. *Fertil Steril* 2015.

went well...[my daughter] is a healthy, happy kid" (respondent no. 41). Some mentioned that the donor had "good genes."

Of the satisfied mothers, many had been disinclined to share parenting with the donor, and they appreciated their known donor's limited involvement in the offspring's life. To minimize the risk of custody conflicts, many had chosen donors with good boundaries: "He lives far away and has his own family. He doesn't have any decision-making role in our lives and he has good boundaries. He's just right about treading closely versus not enough" (respondent no. 124).

Disappointment in the family's relationship with the donor or the donor's intrinsic qualities emerged as themes among mothers who would not choose a known donor again. A few dissatisfied mothers felt that their donors had mental health problems, and some mentioned that the donor was too uninvolved or had communication problems. "It's been difficult to have open communication and resolve conflicts," said a mother who regretted her use of a known donor (respondent no. 51).

Open-identity Donor

A majority of mothers who were satisfied with their choice of open-identity donors were pleased that their 17-year-old offspring would soon have the option of meeting their donors and learning more about them. For example, one mother (respondent no. 10) said, "If [our daughter] does want to meet her donor, then we're extremely supportive." Another commented that she "didn't want [her offspring] to be wondering for the rest of [the offspring's] life who the donor

is" (respondent no. 23). In using the sperm of open-identity donors, many mothers felt that they had avoided custody conflicts and/or parenting by a third person and in so doing had protected the parenting rights of the genetically unrelated comother. Along these lines, one satisfied mother of an open-identity offspring said, "At the time that we were in the process of getting pregnant, there were a lot of really weird family law cases developing—like known donors who agreed to be donors and then resurfaced to claim paternity in custody battles. We did not want that in [our son's] life" (respondent no. 21).

Another satisfied respondent focused on limiting the number of parents in her family to two: "I think it was a good decision to have the parenting just be me and [the comother]" (respondent no. 103). In addition, some satisfied mothers mentioned that they were grateful that the donor had helped them create a family and/or that they were happy with the overall outcome.

The regrets expressed by the few who were dissatisfied that they had chosen an open-identity donor concerned a desire for more information about or access to the donor.

Unknown Donor

Of mothers who were satisfied with their use of unknown donors, a majority focused on a desire to avoid legal conflicts and/or parenting by a third person. "We wanted a sperm donor, not a father," said a mother in this group (respondent no. 97). Most were pleased with the overall outcome, indicating that having an unknown donor had not been detrimental to their offspring. One such mother

stated, “We are a complete, whole family as we are” (respondent no. 28).

Nearly all of the mothers who regretted their use of unknown donors wished that their offspring had information about or access to the donor. If they had it to do over again, and all three donor types were available, some dissatisfied mothers would have opted for open-identity or known donors, since having an unknown donor was painful to their offspring: “Through our experience, we realized that kids have a right to know. My son went through a tough time when he was younger in that he felt that there was a hole in his family tree” (Respondent no. 59).

Other dissatisfied mothers spoke of their unsuccessful efforts to find known donors when they were considering donor options. In addition, some mothers expressed frustration about their limited access to sperm banks with open-identity donors. As one mother (respondent no. 19) put it, “The place [we] had access to only offered an unknown donor. [Open-identity] was not a choice, and if it were, we wouldn’t have chosen unknown.”

DISCUSSION

Through semistructured interviews, the current study assessed whether lesbian mothers of DI adolescent offspring were satisfied with their choice of a known, open-identity, or unknown sperm donor 18 years after conception. Data collected during the fifth wave of the longest running and largest prospective investigation of lesbian families in the United States revealed that a high proportion of mothers would make the same choice of donor type if they had it to do over again. Of those who were satisfied with their choices, nearly equal numbers had used known, open-identity, and unknown donors. Among mothers who were dissatisfied with their choice, a majority had used unknown donors. Birth mothers and comothers had similar responses regarding their (dis)satisfaction with the type of donor used for conception. In a comparison of satisfied with dissatisfied birth mothers by donor type, birth mothers who had selected open-identity donors were more satisfied than dissatisfied, and the reverse was true for birth mothers who had used unknown donors. The birth mothers’ (dis)satisfaction with donor type was unrelated to psychological health problems in the index adolescent offspring.

Lesbian birth mothers and comothers who were pleased with known donors shared their feelings about the donor’s role in their lives and the donor’s intrinsic qualities that made him a good fit for the family. The mothers described how important it was that their offspring had a relationship with the donor—a goal that had been set by half of the mothers choosing known donors during the time of insemination (1). Mothers with involved donors considered the donor and his partner/other children members of the extended family with whom holidays/special events were celebrated. Likewise, in a previous study, 13 NLLFS adolescent offspring reported that they considered their biologic fathers important role models (23). Successfully navigating these relationships typically involves thoughtful negotiations regarding donor involvement, role, and title (e.g., having the child refer to

the donor as a dad, relative, or friend) that usually begin before inseminations are initiated (3, 7, 8). Among the mothers with known donors who preferred not to share parenting with a third party (1, 3, 5), there were many who felt fortunate that they had chosen known donors with good boundaries.

Consistent with the findings of Scheib et al. (4), almost all lesbian mothers who had chosen open-identity donors were pleased with their selection. When the NLLFS participants were considering donor types at time 1, the prospective mothers focused on the offspring’s access to the donor and the mothers’ fear of custody disputes (1). Similarly, at T5, when the NLLFS offspring were 17 years old, the primary themes that emerged in their mothers’ explanations for their satisfaction with open-identity donors related to the needs of the offspring and the mothers. Concerning the offspring, a majority of mothers felt that the decision to use a donor whose identity could soon be known would be of benefit in satisfying the offspring’s curiosity about the donor’s history, personality, and interests (1, 3). In a prior publication, two-thirds of NLLFS offspring with the option to meet indicated that they planned to contact their donors, four said that they would not, and two were undecided (9). Previous research has also shown that adolescents with open-identity donors expected that meeting their donors would teach them more about themselves (6). In keeping with other studies (3, 8), NLLFS mothers of open-identity offspring felt that having a donor who was not a parent enabled them to avoid potential custody conflicts. It is conceivable that the absence of negative interactions with open-identity donors during the first 17 years of the offspring’s life enabled the NLLFS mothers to focus on their gratitude toward the donor and overall satisfaction with the outcome.

A majority of lesbian mothers who had used unknown donors were satisfied with their selection. However, consistent with a recent online survey of 1,700 recipients of donor sperm conducted by the US Donor Sibling Registry (24), proportionally more of the NLLFS mothers choosing unknown donors later regretted that decision, and some dissatisfied mothers wished that they had chosen an open-identity or known donor. The reasons for the NLLFS mothers’ retrospective dissatisfaction concerned the pain and/or frustration their offspring may experience or had experienced in realizing that they would never meet the donor. Since this lost opportunity had not contributed to significant problems in psychological adjustment or a diminished quality of life when NLLFS adolescent offspring with known, open-identity, and unknown donors were compared (9–11), it is possible that the mothers’ concerns may differ from their offspring’s perspective. Moreover, the absence of difference does not mean that the three groups of offspring are the same. Broad measures of psychological adjustment could conceivably fail to capture specific or intermittent areas or periods of distress pertaining to an offspring’s wish to learn more about her or his biological father. Offspring with unknown donors may also feel a need to know more about their origins as they reach adulthood, resulting in discomfort or frustration that they have been denied

access to information that they consider essential to their well-being.

It is important to note that at the time that the NLLFS mothers were inseminating (1986–1992), open-identity sperm donor programs were not universally available. Also, fearing that known donors could be awarded custody by judges who were opposed to same-sex parenting, many lesbians chose unknown donors to maintain control of the custody and care of their children (1, 5, 25). Within a decade of the time that the NLLFS offspring were conceived, a study of women recruited in a California sperm bank that offered both open-identity and unknown donors found that 79% of recipients favored the former (26). By that time, lesbian mothers had more legal protections in the form of coparent adoption, which recognizes the parental status of the genetically unrelated mother (3). As same-sex couples continue to gain civil rights, donor programs should encourage prospective lesbian and gay parents to familiarize themselves with outcome data such as those presented in the current study when considering the long-term needs of their offspring at the time of gamete selection.

Several limitations of our study should be mentioned. First, the lesbian mothers are predominantly Caucasian, urban, and middle class. A more diverse sample would provide insight into the associations among race/ethnicity, region of residence, socioeconomic class, and satisfaction with the types of sperm donors selected. Second, a convenience sample was used for the NLLFS, which may have resulted in a cohort of lesbian mothers who were particularly interested in the psychosocial development of children conceived by DI. However, when the NLLFS was initiated in the 1980s, owing to a long history of discrimination against lesbian and gay people, the targeted population was largely hidden, making it more difficult to obtain a representative sample than it would be today (25). Finally, the findings of the current report may be context specific as many countries do not allow the use of permanently unknown donors (4). The United Nations Convention on the Rights of the Child declared in 1989 that children have the right to know their genetic origins “for the full and harmonious development” of their personalities (4, 27–29). Since nearly all of the mothers in the present study who were dissatisfied with their selection of unknown donors wished that their offspring had information about or access to the donor, future studies should include assessments regarding offspring satisfaction with the type of donor used for their conception (30).

Notwithstanding these limitations, we believe that our study, derived from the largest, longest running prospective investigation of lesbian parent families in the United States, may provide useful insights to health care professionals and prospective lesbian mothers who are engaged in a decision-making process regarding sperm donor selection. It has already been established that donor type had no bearing on overall quality of life or psychological adjustment for the NLLFS adolescents (9–11). The current report reveals that most lesbian mothers of first-generation DI offspring were satisfied with their use of known, open-identity, or unknown

donors and that (dis)satisfaction with donor type was unrelated to offspring psychological health. A majority of dissatisfied mothers had chosen unknown donors, sometimes because the mothers had no other options. The mothers' feelings about donor access and custody concerns played a central role in their satisfaction or dissatisfaction with the donor type they selected. Future studies of lesbian mothers' retrospective satisfaction with sperm donor type will undoubtedly reflect the more widespread availability of open-identity insemination programs and a broader acceptance of same-sex parent families (3, 4, 31).

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