Factors associated with searching for people related through donor conception among donor-conceived people, parents, and donors: a systematic review

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Objective: To review the body of literature to summarize the existing knowledge about factors that shape gamete donor linking and discuss their implications for clinical care and future research. Recent changes in policy, practice, and technology have made it possible for individuals connected through donor conception—donor-conceived (DC) people, parents, and donors—to find and contact one another.

Evidence Review: A bibliographic search of English, French, German, Spanish, and Dutch language peer-reviewed publications was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines using the electronic databases PubMed, EMBASE, and Web of Science Core Collection. The inclusion criteria were as follows: original empirical research with quantitative, qualitative, or mixed methods; research participants were DC people, gamete donors, and/or parents interested in searching for people (genetically) related to them through gamete donation; and a substantial part of the article focused on searching for or an interest in contacting donor-related people. The exclusion criteria were as follows: publications other than original peer-reviewed research and publications on known donors and surrogacy. Methodological quality was assessed using the Critical Appraisal Skills Program checklist for qualitative studies and the Joanna Briggs Institute Critical Appraisal Checklist for quantitative studies. Eligibility assessments, quality assessments, and data extraction were independently performed by 2 teams, with disagreements resolved by discussion.

Results: An initial search yielded 4,040 publications, of which 119 articles were full-text screened and 47 studies were included for review. The studies were diverse in design, setting, recruitment methods, data collection, and stakeholder groups. The DC people, parents, and donors of the studies included had an interest in each other; however, their motives, desired information, and/or expectations regarding their interest and/or seeking contact differed. Among the participants in the studies, the interests of the DC people, parents, and donors were intertwined and not necessarily in conflict. Methodological limitations of the included studies were identified.

Conclusion: Donor linking occurred in a complex array of several factors: psychosocial, sociodemographic, relational, and environmental variables. Further research is needed to better understand the relative influence of these variables and identify the psychosocial

ESSENTIAL POINTS

- Multiple variables, including sex, family type, family relationships, as well as functioning and external influences, were involved in donor linking.
- In contrast to being "merely available", donors may also have a need to connect with the donor-conceived person and their parents that had not been anticipated.
- The interests of donor-conceived people, parents, and donors are intertwined and do not necessarily conflict.

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needs of the different groups. Preliminary findings showed that stakeholders can have an interest in an ongoing contact. However, the studies' methodological shortcomings limited the extent to which these findings could be applied to all people interested in donor-related contact. Follow-up research is needed on what happens after parties are linked. (Fertil Steril Rev® 2021;2:93–119. ©2021 by American Society for Reproductive Medicine.)

Key Words: Donor conception, gamete donation, donor linking, registry, systematic review

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One of the most contentious debates in donor conception centers is on whether and to what extent donor-conceived (DC) people should have access to information about the donor (1, 2). Research has indicated that DC people, parents, and donors are interested in each other (3–5). In the last 2 decades, several societal developments have made it possible for those connected through donor conception to find and contact each other.

In the past, gamete donors were anonymous, donor records were often not maintained, and nondisclosure regarding the method of conception was recommended. Since the 1980s, the practice of donor conception has changed significantly. These changes have occurred in the social, legal, and cultural dimensions of donor conception and on policy- and clinical-practice levels. There is now greater openness in relation to disclosure to the child and others and regarding access to donor information (6). Professional recommendations have supported parental disclosure of donor conception (e.g., the Ethics Committee of the American Society of Reproductive Medicine ([2004 and 2018] (7, 8) and Human Fertilisation and Embryology Authority [2008] (9)). Increasing numbers of jurisdictions have banned anonymous donation. Fourteen jurisdictions worldwide have now mandated only open-identity donation (i.e., the donor is identifiable to the DC people at a certain age or at maturity): Sweden, 1984; Austria, 1992; Victoria (Australia), 1998; Switzerland, 2001; the Netherlands, 2004; Western Australia (Australia), 2004; Norway, 2005; United Kingdom, 2005; New Zealand, 2005; Finland, 2007; New South Wales (Australia), 2008; Portugal, 2018; Germany, 2018; and Ireland, 2020 (10–12). In the United States, where anonymity has been the norm, programs and agencies have a wide range of policies on access to donor information and contact among the parties. However, an increasing number of programs have included sperm and egg donors who agree to be identifiable (13). Two states in the United States have passed laws that seek donor consent to identifiability. For people in jurisdictions without open-identity legislation or for people born before legislative changes, voluntary registries and donor-linking services have been created. These services can be offered by a donor program (14, 15), a DC person, and/or parent-led organizations (e.g., Donor Sibling Registry [United States, 2000]) or funded by a federal or state government (e.g., Donor-Conceived Register [United Kingdom, 2003], Fiom KID-DNA database [the Netherlands, 2010], Voluntary Registers [Australia, 2001] (16, 17)). Additionally, advancements in direct-to-consumer DNA testing with genealogy services (e.g., FamilyTreeDNA, MyHeritage, and 23andMe) and the expansion of social media have been successfully used to find donors and other genetic relatives (17, 18). Because DNA testing increases the risk of inadvertent disclosure and sharing of donors' information without consent (18, 19), the American Society of Reproductive Medicine's Ethics Committee (2019) (20) has recommended that "programs make clear to donors and intended parents that the promises of anonymity cannot be assured."

These changes in policy, practice, and technology have made it possible for DC people, parents, and donors to find and contact each other. Most often, DC persons search for donors and same-donor peers, donors make themselves available to DC people, and parents seek other donor-related families. A body of research has now emerged to investigate the motivations, experiences, preferences, and challenges of those who search and attempt contact within the context of donor conception.

Aims and Objectives

In this systematic review, we summarized and integrated the existing knowledge on the factors associated with the interest in and searching for people related through donor conception among DC people, parents, and donors and identified areas of research in need of further investigation. Understanding the factors that are associated with the decision to search for information and/or contact donor-related people may assist agencies, clinics, policy makers, and counselors in meeting the needs of all stakeholders in the context of donor linking.

METHODS

Search Strategy

This systematic review followed the Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines (21) and was prospectively registered (PROSPERO CRD42020161023).

A bibliographic search of English, French, German, Spanish, and Dutch language peer-reviewed publications in 3 electronic databases (PubMed, EMBASE, and Web of Science Core Collection) was performed for all publication years (end date: June 30, 2020). Search terms included all potential keywords relating to assisted reproduction technologies, donor linking, tissue banks, or registry. MeSH terms were used where applicable. Table 1 presents the exact search term combinations ("search key") used in each database. A manual search of the references in the articles included was performed to identify additional studies.

TABLE 1

Search keys used in each electronic database.

1. **PUBMED**

SEARCH KEY concept 1:
“Reproductive Techniques, Assisted"[Mesh:NoExp] OR “Donor Conception"[Mesh] OR “donor conception"[tiab] OR “gamete donor”[tiab] OR “Oocyte Donation"[Mesh] OR “oocyte don*"[tiab] OR “ovum donation"[tiab] OR “egg don*"[tiab] OR “Insemination, Artificial, Heterologous"[Mesh] OR “heterologous artificial insemination"[tiab] OR “artificial donor insemination”[tiab] OR “donor artificial insemination"[tiab] OR “donor insemination”[tiab] OR “sperm-don*"[tiab] OR “semen don*"[tiab] OR “semen provider"[tiab] OR “donor conceived” [tiab] OR ((“Tissue Donors "[Mesh:NoExp] AND (“psychology"[Subheading] OR “Legislation and jurisprudence"[Subheading])) AND (“Semen"[Mesh] OR “Sperm Banks"[Mesh] OR “Spermatozoa"[Mesh]))

combined with

SEARCH KEY concept 2:
“Registries"[MeSH] OR register[tiab] OR registries[tiab] OR registry[tiab] OR “Parent-Child Relations"[MeSH] OR “Family Relations"[MeSH:NoExp] OR “Disclosure"[MeSH] OR “sibling relations”[MeSH:NoExp] OR “relatedness”[tiab] OR “contact*”[tiab] OR donor-link*[tiab] OR linked-famil*[tiab] OR meet[tiab] OR meeting[tiab] OR involv*[tiab] OR “information seeking behavior” [MeSH] OR “information seeking”[tiab]

2. **EMBASE**

SEARCH KEY concept 1:
“heterologous artificial insemination”/exp OR “heterologous artificial insemination”:ti,ab,kw OR “donor conception”/exp OR ((“conception”/de OR “reproduction”/de OR “artificial insemination”/de) AND “donor”/exp) OR “donor artificial insemination”:ti,ab,kw OR “artificial donor insemination”:ti,ab,kw OR “donor insemination”:ti,ab,kw OR “donor conception”:ti,ab,kw OR “donor conceived”:ti,ab,kw OR “Sperm Donor”/exp OR “sperm don*”:ti,ab,kw OR “semen don*”:ti,ab,kw OR “semen provider”:ti,ab,kw OR “Oocyte Donation”/exp OR “oocyte don*”:ti,ab,kw OR “ovum donation”:ti,ab,kw OR “egg don*”:ti,ab,kw

combined with

SEARCH KEY concept 2:
“Register”/exp OR “register”:ti,ab,kw OR “registries”:ti,ab,kw OR “registry”:ti,ab,kw OR “information seeking”/exp OR “child parent relation”/exp OR “family relation”/de OR “sibling relation”/exp OR “information seeking”:ti,ab,kw OR “relatedness”:ti,ab,kw OR “contact*”:ti,ab,kw OR “donor-link*”:ti,ab,kw OR “linked-famil*”:ti,ab,kw OR “meet”:ti,ab,kw OR “meeting”:ti,ab,kw OR “involv*”:ti,ab,kw

3. **Web of Science Core Collection**

SEARCH KEY concept 1:
TS = (“Heterologous Artificial Insemination” OR “donor artificial insemination” OR “artificial donor insemination” OR “donor insemination” OR “donor conception” OR “donor conceived” OR “sperm don*" OR “semen don*” OR “semen provider” OR “oocyte don*” OR “ovum donation” OR “egg don*”)

combined with

SEARCH KEY concept 2:
TS = (“register” OR “registries” OR “registry” OR “information seeking” OR “relatedness” OR “contact*” OR “donor-link*” OR “linked-famil*” OR “meet” OR “meeting” OR “involv*”)

Note: TS = topic.

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Study Selection

We used the following inclusion criteria by mentioning it in the title or abstract: original empirical research (with a quantitative, qualitative, or mixed methodology); research participants were DC people, donors, or parents in the context of egg, sperm, or embryo donation who were interested in searching for people related to them through donor conception; gamete donors were anonymous or had an open identity (identifiable to DC people at a certain age or at maturity); and a substantial part of the article focused on searching and/or interest in contacting donor-related people. Research articles that included >1 participant group (i.e., DC people, donors, and parents) was required to present separate data for each group. Studies with known donors (i.e., known to the parent(s) before conception) were excluded because any contact between the parties was not a result of the search. Similarly, studies about surrogacy were also excluded because the different parties typically meet early on.

The exclusion criteria were as follows: publications other than original, peer-reviewed research articles (e.g., reviews, abstracts, single case reports, and opinions) and publications about known donation and surrogacy, as explained above.

Screening and Quality Assessment

At least 1 member of each of the 2 teams (team 1: investigators A.I. and J.M.; team 2: investigators J.E.S. and E.M.) independently screened the titles, abstracts, and full-text reports of all the retrieved studies using Covidence, a software tool for conducting systematic reviews. Any disagreements on inclusion/exclusion were resolved by discussion. Subsequently, the methodological quality of the articles was assessed using the Critical Appraisal Skills Program checklist for qualitative studies (22) and Joanna Briggs Institute Critical Appraisal Checklist for quantitative studies (23). The checklist criteria included descriptions of the rationale of the study, study population, research methodology (quantitative and qualitative), and outcome variables (quantitative and qualitative). The quality assessment was performed by J.M. and cross checked by A.I. Disagreement between the reviewers was resolved by discussion until a consensus was reached.

Data Extraction

A structured data extraction spreadsheet was jointly developed by all the investigators. The extracted data included author details, publication year, location of research, research features (research design, aim, method of data collection, and participant demographics), and main results (Table 2). Eligible studies were thoroughly examined for relevant data. Data were extracted from each study and compiled in the spreadsheet by the investigator E.M. and cross checked by the other investigators. Disagreements regarding the extracted data were resolved by discussion.

RESULTS

Search Strategy and Study Selection

The screening process is summarized in the Preferred Reporting Items for Systematic reviews and Meta-Analyses flow chart (Fig. 1). An initial literature search yielded 4,040 publications, 119 of which were further evaluated by screening the full text; 72 of these were excluded. Studies on embryo donation were not explicitly excluded, but none were found to meet the study criteria because they concerned known donors. Eventually, 47 eligible studies were included in the systematic review. All of them met the methodological assessment criteria (Supplemental Table 1, available online). No studies on donor linking were published before 2003. Nine studies were published between 2003 and 2010 and 38 from 2011 to 2020, confirming the growing interest in this topic.

Study Characteristics

Data from the 47 publications were examined and are shown in Table 2, which is organized according to the study participants (DC people, parents, and donors). Some publications are mentioned in >1 section because they included findings from multiple participant groups. Most publications (n = 41) focused on a single group, somewhat evenly divided across DC people, parents, and donors. Among the studies, including those reflecting multiple stakeholders, 21 focused on DC people, 14 on parents, and 21 on donors.

Location of research Half of the 47 studies originated from the United States (n = 24), followed by the United Kingdom (n = 8), Australia (n = 7), Sweden (n = 3), the Netherlands (n = 2), Finland (n = 1), Germany (n = 1), and Belgium (n = 1). These jurisdictions have a variety of laws, guidelines, and practices regarding donor conception; yet, most (see Introduction) have undergone legislative changes and have now mandated open-identity donation. In addition, several jurisdictions now have informal or voluntary linking registries for those who cannot access donor information directly from the gamete donation program or a formal registry. Overall, the research primarily included participants of European descent and was conducted in countries with Anglo-European cultures.

Research design Almost half of the 47 studies (20) combined quantitative and qualitative data (mixed-method research), 17 used solely qualitative methods, and 10 used solely quantitative methods.

Most studies were either exploratory or descriptive (Table 2); 19 studies also used a comparative design. Comparisons most often focused on differences in family type (8/19), followed by donor type (based on sex and before and after legislative changes; 4/19) and different stakeholder groups (3/19). Three studies focused on individual differences among DC people (based on attachment, type of donor conception, and interest in information). One study (24) was a replication study. No study used a correlational design. All the studies focused on participants at only one point in time, including 5 studies that had longitudinal/follow-up designs.

Ten publications included data collected from the same study sample, including findings from 3 samples that were reported in several publications, i.e., sample 1 (16, 25–27), sample 2 (28, 29), and sample 3 (30, 31), and 1 sample that participated at 2 different time points that were reported in separate publications (32, 33). Thus, the 47 publications represented 41 study samples.

Research instruments Majority of the studies (27/47) used self-reporting questionnaires, followed by 13 studies that used interviews. The remaining 7 were conducted either using a combination of interviews and surveys or by incorporating other data sources (e.g., online donor profiles and analysis of registry data).

Of the studies including a questionnaire (n = 27), 3 used a psychometrically validated questionnaire: 1 study (27) used the aspects of identity questionnaire; another (34) used the experiences in close relationships-relationship structures; and the third study (35) used the perceived competence scale for children, the child behavior checklist 4-18, and the parent-child interaction questionnaire child version. Lozano et al. (34) developed the donor conception identity questionnaire, and Isaksson et al. (32) used an adapted version of the donor ambivalence scale developed by Klock et al. (36). Some studies used parts of the same questionnaire across >1 study (24, 28, 37–39). Majority of the studies (19/27) reported only the study questionnaire's topics and did not specify the construction process of the questionnaire. Similarly, in the studies using interview, the topics were mentioned in all the cases, but few provided details of the processes used to develop the interview instrument/guide.

Participants

Recruitment source. With the exception of one (15), all the study samples were self-selected. Almost two thirds (30/47) of the studies recruited participants from locations that focus

TABLE 2

Characteristics of the studies.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Donor-conceived people							
Beeson et al. (2011)/USA	RR = UTD n = 741; 69% ♀, 31% ♂	Age: 9–40 years; of which 53% ≤18 years and 47% ≥19 years 62% HE family (42% partnered), 38% LE family (62% partnered) Disclosure (always knew): 46% HE families, 79% LE families	SD HE/LE: 93%/82% anonymous; 7%/18% known or willing-to-be known	MMR descriptive, comparative	Questionnaire[a] with open- and closed-ended questions	DSR—voluntary private funded registry Convenience sample: invitation and link sent to LGBT groups and list that might include DC families	To explore how DCP learned of the method of their conception and their desire to contact their donor
Blyth (2012)/UK	RR = UTD n = 8; 5 ♀, 3 ♂	Age: 44–65 years 100% HE partnered family Disclosure: 11–56 years	SD anonymous	Qualitative explorative	Semistructured interview	Convenience	To explore the perceptions and experiences of individuals conceived via anonymous sperm donation who had discovered the identity of their donor and same-donor peers and had established contact with each other
Crawshaw et al. (2016)/UK	RR = 37% n = 65; 77% ♀, 22% ♂, 1% not specified	M age = 36 years (SD = 12.64) 98% European descent, 2% Asian No information about the age of disclosure	SD anonymous	MMR descriptive, comparative	Questionnaire[a] with open- and closed-ended questions	UKDL—voluntary funded registry	To shed light on DCP's and donors' views on service and support needs when searching for genetic relatives using DNA testing
Cushing (2010)/USA	RR = UTD n = 16; 14 ♀, 2 ♂	M age = 37 years (22–59) Disclosure: always knew—46 years	SD assumed anonymous	Qualitative explorative	Semistructured interview	Via consumer groups	To explore how DCP search for information about their donors and genetic heritage and the characteristics of such searches

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TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Dempsey et al. (2019)/AUS	RR = 45% n = 17; 13 ♀, 4 ♂	Age: 29% ≤29 years, 71% between 30–39 years No information about the age of disclosure	SD former anonymous	Qualitative explorative	Analysis of written documents—statement of reasons, outlining reasons for applying to register and their goals	VARTA central registry—voluntary funded registry	To examine information and contact sought by donor linking applicants (donors, recipient parents, and DCP) to the central and voluntary registers in the state of Victoria, Australia
Frith et al. (2018)/UK	RR = 38% n = 65; 77% ♀, 22% ♂, 1% not specified	M age = 36 years (21–65) 98% Caucasian, 2% Asian Disclosure: 15% 0–10 years, 37% 11–20 years, 34% 21–30 years, 14% >31 years	SD anonymous	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	UKDL—voluntary funded registry	To consider the experiences of adults conceived following sperm donation who were registered with a voluntary DNA linking register and examine how awareness of being DC affected their identity and family relationships as well as the process of searching for their donor and same-donor peers
Hertz et al. (2013)/USA	RR = UTD n = 314; 75% ♀, 25% ♂	Age: 13 to >41 years; of which 35 ≤18 years and 65% ≥19 years 69% HE partnered family, 31% LE partnered family Disclosed early (≤18 years): 100% in LE partnered families, 60% in HE partnered families	SD 89%: anonymous, 6% open-ID, 2% known, 3% other	MMR comparative	Questionnaire[a] with open- and closed-ended questions	DSR—voluntary private funded registry and social media	To explore how DCP make sense of their donor and their desires around contacting their sperm donor

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TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Hertz et al. (2017)/USA	RR = UTD n = 419; 78% ♀, 22% ♂	M age = 23 years (13–50+); 23%: 13–18 years, 50%: 19–30 years, 27%: 30–50+ years 54% HE partnered family, 18% LE partnered family, 27% single-mother family, 1% other 99% Caucasian No information about the age of disclosure	SD No information on type of donor	MMR, descriptive, comparative	Questionnaire[a] with open and closed questions	DSR, SMC, other consumer support websites and social media	To explore how relationships develop between recipient parents and DCP who connected to those who used the same donor via the internet
Jadva et al. (2010)/USA	RR = phase 1: 19% (n = 63), phase 2: 22% (n = 102) n = 165; 75% ♀, 25% ♂	M age = 22 years (13–61); 50% < 18 years 58% HE partnered family, 15% LE partnered family, 23% single-mother family, 4% missing 95% White Disclosure: all before 18 years, except 19% from HE families	SD anonymous	MMR descriptive	Questionnaire[a] with open and closed questions	DSR—voluntary private funded registry	To investigate when individuals conceived by donor insemination search for and contact their donor and/or same-donor peers
Kelly et al. (2019)/AUS	RR = 55% (for entire sample of DCPs and SD) n = 17, 76% ♀, 24% ♂	Age: 71% between 30–39 years (conceived pre-1988), 29% conceived between 1988–1998 No information about age of disclosure	SD former anonymous	Qualitative explorative	Analysis of written documents—statement of reasons, outlining reasons for applying to register and their goals	VARTA central registry – statutory registry	To explore applicants' motivations for seeking information and their contact goals
Klotz (2016)/D	RR = UTD n = 6; no information on sex	Age: late 20s Late disclosure	SD anonymous	Qualitative explorative	Interviews and written correspondence	Advocacy groups, clinics, and investigator's social circle	To examine the practices of "kinship knowledge-management" among DC persons
Koh et al. (2020)/USA	RR = 76/78 index offspring n = 76; 49% ♀, 51% ♂	M age = 25 years 100% LE (single and partnered) family 91% White No information about the age of disclosure	SD 40%: anonymous, 32% open-ID, 29% known	MMR descriptive, longitudinal	Questionnaire[a] with open and closed questions	Original advertisement in LGBT newspapers and on LGBT events	To study how adult DCP in planned lesbian-parent families relate to their unknown or known donors

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Lozano et al. (2019)/USA	RR = UTD n = 488; 64% ♀, 17% ♂, 2.5% nonbinary, 16% unknown	M age = 29 years (18–74) 67% HE partnered family, 26% LGBT partnered family, 7% not disclosed 88% White No information about the age of disclosure	SD 93%, OD 4%, 3% not disclosed assumed anonymous	Quantitative descriptive, comparative	Questionnaire[a] with open and closed questions	DSR—voluntary private funded registry and social media	To examine whether individual differences in attachment among DCP predict adults' self-reported curiosity about their donor conception identity as well as attempt to find the donor and establish contact
Mahlstedt et al. (2010)/USA	RR = 87% n = 85; 85% ♀, 15% ♂	Age; 52%: 18–27 years, 26%: 28–37 years, 20%: 38–57 years, 2% >58 years 88% HE mothers (87% partnered) Disclosure: 34% <10 years, 19% 10–18 years, 47% >18 years	SD 94% anonymous, 6% open-ID	Quantitative descriptive	Questionnaire[a] with open and closed questions	Online support networks for DC people	To provide an in-depth analysis of DCP's attitudes toward their means of conception and the practice of sperm donation in the United States
Persaud et al. (2017)/USA	RR: UTD n = 23; 16 ♀, 7 ♂	M age = 14 years (12–19); 61% single mother family, 39% LE partnered family 96% White Disclosure: 18% always knew, 39% could not recall, 39% <7 years, 4% >10 years	SD anonymous	Qualitative explorative	Semistructured interviews	DSR—informal and voluntary registry	To examine the experiences of adolescents conceived using sperm donation when contacting and meeting same-donor peers, their motivations for this contact, and how they make meaning of these relationships
Rodino et al. (2011)/AUS	RR = UTD n = 23; 74% ♀, 26% ♂	Age: 15–34 years, 9% <18 years, 65% 18–27 years, 26% 28–37 years Disclosure: 22% <5 years, 43% 11–18 years, 35%>18 years	SD 96% anonymous, 4% known donor	Quantitative descriptive, comparative	Questionnaire[a] with open- and closed-ended questions	Nationwide consumer support websites, clinics, emails to ANZICA, Reproductive Technology Council of Western Australia, ITA (pre-VARTA)	To examine the views of donors, recipients, and DCP on donor information and donor's feelings about being contacted

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TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Scheib et al. (2005)/USA	RR = 60% n = 29; 38% ♀, 62% ♂	M age = 15 years (12–17) 21% HE partnered family, 41% LE partnered family, 38% single-mother family Disclosure: 76% always knew	SD open-ID	Quantitative descriptive, comparative	Questionnaire[a] with open- and closed-ended questions	Open-identity program at clinic—clinical registry	To explore the experiences of DC adolescents who have open-identity sperm donors, including their experience growing up knowing how they were conceived and their interest in the donor's identity and potential contact
Scheib et al. (2017)/USA	RR = 33% requested donor's identity n = 85; 61% ♀, 39% ♂	M age = 22 years (18–29) 20% HE partnered family, 51% LE partnered family, 29% single-mother family No information about the age of disclosure	SD open-ID	MMR descriptive, comparative	Archival data analysis + semistructured open-ended questions	Open-identity program at clinic—clinical registry	To report findings from 10 years of requests from adults eligible to obtain their open-identity sperm donor's information, including plans to contact the donor
van den Akker et al. (2015)/UK	RR = 38% n = 65; 77% ♀, 22% ♂, 1% unknown	M age = 36 years (SD = 12.64) Disclosure: 15% 0–10 years, 37% 11–20 years, 34% 21–30 years, 14% >31 years	SD anonymous	Quantitative descriptive, comparative	Questionnaire[a,b] with open- and closed-ended questions	UKDL—voluntary funded registry	To explore DC people's and donors' experiences who search for a genetic link using a DNA-based voluntary register service
Vanfraussen et al. (2003)/BE	RR = 85.7% n = 41; 46% ♀, 54% ♂	M age = 10 years (7–17) 100% LE family, 75% partnered, 25% seperated No information about the age of disclosure	SD anonymous	MMR comparative, longitudinal	Semistructured interview—questionnaire[b]	Clinic	To explore why some children who are raised in lesbian donor insemination families like to know more about the donor while others do not, as well as whether psychological variables are linked to whether or not they want to know more about the donor

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TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Zadeh et al. (2018)/UK	RR = 84% n = 44; 64% ♀, 36% ♂	M age = 14 years 100% HE partnered family Disclosure: all in childhood	20% SD, 30% OD, 50% surrogacy; all SD and OD anonymous at donation	Qualitative longitudinal, comparative	Semistructured interview	Clinic	To explore the perspectives of adolescents conceived using surrogacy, egg or sperm donation regarding their conception, and the third party involved
Parents							
Blyth et al. (2013)/USA	RR = UTD n = 108 mothers via oocyte donation; 63% gestational mothers 31% gestational mothers and fathers 3% single nongestational mothers 2% pairs of gestational and nongestational mother 1% nongestational mother and father 31% also used donor sperm	148 children 1–15 years old (59% <5 years) 54 had 1 child; 34 had 2 children and 7 had 3 children 20% single parent family, 80% partnered family Disclosure: 51% informed, 42% not yet informed, 4% not yet decided to tell, 3% decided not to tell	OD 34% open-ID donor 26% anonymous 40% used anonymous donor (no choice) <1% chose open-ID and then found out they were anonymous	MMR descriptive	Questionnaire[a] with open and closed questions	DSR—voluntary private funded registry and open access sites	To explore the perspectives of parents of children conceived following oocyte donation
Dempsey et al. (2019)/AUS	RR = 45% n = 19; all ♀	Age: 53% 40–49 years, 21% 50+ years, 74% single with a child ≤6 years	SD former anonymous	Qualitative explorative	Analysis of written documents—statement of reasons, outlining reasons for applying to register and their goals	VARTA central registry—voluntary funded registry	To examine information and contact sought by donor linking applicants (donors, recipient parents, and DC people) to the central and voluntary registers in the state of Victoria, Australia

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Freeman et al. (2009)/ USA	RR = 19% n = 791 parents; 98% ♀	M age = 43 years (range 26–62) M age oldest child = 8 years (max 39), 56% had oldest child ≤ 7 years 94% White 39% single mother family, 35% LE partnered family, 21% HE partnered family, 5% nonspecified	96% SD, 2% OD, <1% ED No information on type of donor	MMR descriptive, comparative	Questionnaire[a] with open and closed questions	DSR—voluntary private funded registry	To investigate parents' motivations for searching and contacting their child's same-donor peers and donor
Goldberg and Scheib (2015)/USA	RR = 14% n = 50; all ♀	M age = 45 years (SD = 8.33) M age oldest child = 10 years (SD 6.74) 88% European descent 28% single mother family, 72% LE partnered family	SD 94% open-ID 6% anonymous	Qualitative	Semistructured interview	Voluntary clinic registry (family contact list)	To explore the motivations and experiences of female-partnered and single mothers to contact other families who share the same donor
Hershberger et al. (2020)/USA	RR = UTD n = 6 parent-couples; 6 ♂, 6 ♀	Age: 45–62 years Age of the child: 8–11 years 100% European descent 100% HE partnered family	OD 83% anonymous 17% known donor	Qualitative explorative	Semistructured interview	Oocyte donation agency	To explore the views and perspectives about genetic relationships and lineages among women who were oocyte donors and parents who received donated oocytes 10 to 12 years after the donors and parents underwent oocyte donation procedures to establish a pregnancy

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Hertz and Mattes (2011)/USA	RR = UTD n = 587; 585 ♂, all started as single mothers	84% between 30–49 years old 60% had oldest child < 4 years old, 27% between 5–9, 13% older than 10; 92% European descent 76% single	SD assumed anonymous	MMR descriptive	Questionnaire[a] with open and closed questions	SMC and snowballing	To explore the dynamics of donor-related/ same-donor peer families
Hertz et al. (2017)/USA	RR = UTD n = 2217 parents; 97% ♀	70% parents between 30–49 years 38% had oldest child <5 years, 25% between 5–9 years and 37% >10 years 94% Caucasian 50% single, 48% partnered	SD Donor type unspecified	MMR descriptive comparative	Questionnaire[a] with open and closed questions	DSR, SMC, other consumer support websites and social media	To explore how relationships develop between recipient parents and DC offspring who connected to those who used the same donor via internet
Kelly and Dempsey (2017)/AUS	RR = UTD n = 25; all ♀	M age child = 5 years (4 months–18yrs) All single-mother families	SD 72%, SD and OD 20%, ED 8% OD were known prior to conception, SD not	Qualitative explorative	Semistructured interview	SMC, Donor Conception Australian Facebook and online fora	To explore how parents engage with donor linking and the mechanisms they use to make contact
Kelly (2019)/AUS	RR = UTD n = 25; all ♀	M age child = 5 years (4 months–18yrs) All single-mother families	SD 72%, SD and OD 20%, ED 8% OD were known prior to conception, SD not	Qualitative explorative	Semistructured interview	SMC, Donor Conception Australian Facebook and online fora	To explore the challenge of whether to participate in donor linking among single mothers by choice
Millbank (2014)/AUS	RR = UTD n = 21; 20 ♀, 1 ♂	Age of the child (few months to 20 years), 2 parents still pregnant 33% single-mother family, 24% HE partnered family, 43% LE partnered family	SD 5% known, 95% anonymous	Qualitative explorative	Semistructured interview	Drawn from a larger empirical study on decision-making concerning stored embryos	To explore the effectiveness of formal donor identity registers through parents' experiences and wishes
Rodino et al. (2011)/AUS	RR = UTD n = 125	Age: 18–62 years 50% single-mother family, 19% LE partnered family, 31% HE partnered family	SD 86%, OD 14% 18% known donor, 79% combined anonymous and open-ID donor	Quantitative descriptive, comparative	Questionnaire[a] with open- and closed-ended questions	Nationwide consumer support websites, clinics, emails to ANZICA, Reproductive Technology Council of Western Australia, ITA (pre-VARTA)	To examine the views of donors, recipients, and DC people on donor information and donor's feelings about being contacted

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Sawyer et al. (2013)/USA	RR = UTD n = 1700; ♀, all genetic mothers	Age: 31% < 40 years, 48% between 40–49 years, 21% >50 years Age of the child: 45% between 1–5 years, 39% between 6–15 years, 9% between 16–20 years, 6% > 21 years 44% single-mother family, 33% LE partnered family, 23% HE partnered family	SD 27% open-ID, 47% anonymous, 24% no choice	Quantitative descriptive, comparative	Questionnaire[a] with closed-ended questions	DSR—voluntary private funded registry and social media	To understand the perspectives of recipients who had used donor spermatozoa, including choice of sperm bank and donor, reporting of births and genetic disorders, disclosure, contact with donor and same-donor peers, regulation of sperm donor activity and genetic testing, and access to medical information
Scheib et al. (2003)/USA	RR = 75% n = 55 families; 45 mothers and 28 coparents	M age mother = 50 years, M age coparents = 48 years M age child = 14 years (12–17) 56% > 1 child, 53% had the same donor as sibling 38% single mother family, 40% LE partnered family, 22% HE partnered family	SD open-ID	MMR descriptive comparative	Questionnaire[a] with open- and closed-ended questions	Clinic (open-identity program)	To explore the experiences of parents with open-identity donors
Scheib and Ruby (2008)/USA	RR = 78% Study 1: n = 14; all ♀	M age child = 4 years (6 months–9 years) 100% one child 50% single-mother family, 43% LE partnered family, 7% HE partnered family	SD open-ID	MMR descriptive comparative	Questionnaire[a] with open- and closed-ended questions	Voluntary clinic registry (Family Contact List)	To examine the experiences of contact among same-donor families

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
	RR = UTD Study 2: n = 90 members of contact list and n = 515 all clinic families	No information on child age; members of contact list: 70% 1 child, 34% single mother families, 63% LE partnered families, 2% HE partnered families; Clinic families: 70% 1 child, 20% single mother families, 66% LE partnered families, 14% HE partnered families	SD open-ID and anonymous	Quantitative comparative	Archive data	Clinic registry (Family Contact List) archives	To examine the experiences of contact among same-donor families
Donors							
Blyth et al. (2017)/UK	RR = 32% SD, 71% OD n = 26; 21 ♂, 5 ♀	SD 42–78 years, OD 51–61 years	SD and OD former anonymous	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	UKDL—voluntary funded registry	To examine donors' reasons for searching for or making information about themselves available to DC people
Bolt et al. (2019)/NL	RR = 73% n = 179; all ♂	Md = 63 (35–78), Prtnered: 71% Own children: 81%	SD, 81% former anonymous, 14% open-ID, 5% donated both anonymously and non-anonymously	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	Fiom KID-DNA Database—voluntary funded database	To examine the motivations of anonymous sperm donors to release their identity
Crawshaw et al. (2007)/UK	RR = 43% n = 32; all ♂	No information	SD anonymous	Qualitative explorative	Interview with closed- and open-ended questions	Clinic	To consider the donors' attitudes and views about a proposed voluntary register
Crawshaw et al. (2016)/UK	RR = 37% n = 26; 21 ♂, 5 ♀	SD M age = 55 (SD = 8.95), OD M age = 56 (SD = 4.14) 100% European descent	SD and OD former anonymous	MMR descriptive Comparative	Questionnaire[a] with open- and closed-ended questions	UKDL—voluntary funded registry	To shed light on DCP's and donors' views on service and support needs when searching for genetic relatives with the aid of DNA testing

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Daniels et al. (2005)/SE	RR = 100% n = 30; all ♂	Clinic 1: M age = 37 years (28–46), Clinic 2: M age = 34 years (26–47)	SD open-ID	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	2 clinics	To examine SD attitudes towards their 3 families (birth family, family with partner, and recipient family) with regards to their donation
Daniels et al. (2012)/USA	RR = UTD n = 164; all ♂	Age: 20–60+ years [30.7% ≤ 40/ 69.4% > 40 years] Partnered: 71% Own children: 58%	SD No information on type of donation	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	DSR—voluntary private funded registry and social media	To investigate the motivations, views, and experiences of sperm donors willing to have contact their DCP
Dempsey et al. (2019)/AUS	RR = 45% n = 6; all ♂	Age: 67% 50+ years Partnered: 67%	SD former anonymous	Qualitative explorative	Analysis of written documents—statement of reasons, outlining reasons for applying to register and their goals	VARTA central registry—voluntary funded registry	To examine information and contact sought by donor linking applicants (donors, recipient parents, and DC people) to the central and voluntary registers in the state of Victoria, Australia
Hershberger et al. (2020)/USA	RR = UTD n = 3; all ♀	Age: 31–36 years 100% European descent 2/3 had children of their own	OD anonymous	Qualitative explorative	Semistructured interview	Oocyte donation agency	To explore the views and perspectives about genetic relationships and lineages among women who were oocyte donors and parents who received donated oocytes 10 to 12 years after the donors and parents underwent oocyte donation procedures to establish a pregnancy
Hertz et al. (2015)/USA	RR = UTD n = 57; all ♂	M age=51 years 51% married 56% had own children 81% heterosexual 93% Caucasian	SD: 35 (former) anonymous, 17 open-ID, 5 known	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	DSR—voluntary private funded registry and social media	To explore the experiences SD who had contacted their DCP or their parents

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Hertz (2018)/USA	RR = UTD 50 online profiles 10 interviews all ♂	No age data 2003: 68% White, 12% Asian, 8% AA/BA, 4% Hispanic, 8% mixed 2017: 61% White, 4% Asian, 4% AA/BA, 22% Hispanic, 9% mixed	SD profiles 2003: 60% anonymous, 40% open-ID; 2017: 100% open-ID Interviews: former anonymous	Qualitative explorative	Data from donor profiles and interview	Online profiles from a clinic and convenience sample	To explore how donors decide between being anonymous or open-ID and trace the evolving narrative about donors and their DCP
Isaksson et al. (2014)/SE	RR = 74% SD, 83% OD n = 210; 84 ♂, 126 ♀	SD M age = 41 years, 26% single, 56% own children OD M age = 37 years, 19% single, 77% own children	SD and OD, all open-ID	Quantitative descriptive, longitudinal	Questionnaire[a,b] with closed-ended questions	7 clinics	To investigate the attitudes and preferences regarding future contact with DCP 5-8 years after donation
Jadva et al.(2011)/USA	RR = 25% SD, 23% OD n = 74; 63 ♂, 11 ♀	SD M age = 47 years (20–72), 13% single, 64% own children, 83% White OD M age = 38 years (28–47), 9% single, 55% own children, 82% White	SD and OD former anonymous	MMR descriptive	Questionnaire[a] with open- and closed-ended questions	DSR—voluntary private funded registry and social media	To examine donors' experiences of anonymous donation and subsequent contact with their DCP
Kelly et al. (2019)/AUS	RR = 55% (for entire sample of DCPs and SD) n = 6; all ♂	Age: 3/6 donors ≥60 4/6 partnered	SD former anonymous	Qualitative explorative	Analysis of written documents—statement of reasons, outlining reasons for applying to register and their goals	VARTA central registry - statutory registry	To explore applicants' motivations for applying for information and their contact goals
Kirkman et al. (2014)/AUS	RR = UTD n = 42; 36 ♂, 6 ♀	Age: 40–73 years, donated between 1970-1997	SD and OD combined anonymous and former anonymous	Qualitative explorative	Semistructured interview	Advertising/media campaign in state Victoria	To explore the expectations and experiences of anonymous donors about contact with their DCP

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Lampic et al. (2014)/SE	RR SD: T1 = 82% (n = 93), T2 = 71% (n = 80); RR OD: T1 = 90% (n = 141), T2 = 80% (n = 125)1 n = 234 T1: n = 234; 93 female, 141 male; T2: n = 205; 80 ♂, 125 ♀	SD M age = 34 years, 38% single, 38% own children OD M age = 30 years, 26% single, 65% own children	SD and OD, all open-ID	Quantitative descriptive, comparative, longitudinal	Questionnaire[a] with open- and closed-ended questions	7 clinics	To examine donors' attitudes toward disclosure to and relationship with to DCP 2 and 14 months after donation
Miettinen et al. (2019)/FI	RR = 75.2% n = 358; all ♀	Age: 23–37 years 73% own children at time of first donation	OD anonymous: 135, OD former anonymous: 155, open-ID: 68	MMR comparative	Questionnaire[a] with open- and closed-ended questions	3 clinics	To explore OD attitudes and expectations concerning contact with their DCP and contact between DCP and their own children
Nelson and Hertz (2017)/USA	RR = 12% n = 234; 121 ♂, 113 ♀	SD M age = 51 years, 19% single, 60% own children OD M age = 36 years, 15% single, 59% own children	SD: 65% former anonymous, 29% open-ID, 8% other/ unclear OD: 60% former anonymous, 25% open-ID, 15% other/ unclear	MMR comparative	Questionnaire[a] with open- and closed-ended questions	DSR—voluntary private funded registry	To examine differences between sperm and egg donors with respect to responsibility for their DCP
Rodino et al. (2011)/AUS	RR = UTD n = 39; 15 ♂, 24 ♀	SD age = 25–62 years, 40% single OD age = 24–39 years, 25% single	SD: 93% combined anonymous and open-ID, 7% known OD: 8% combined anonymous and open-ID, 92% known	Quantitative descriptive, comparative	Questionnaire[a] with open- and closed-ended questions	Nationwide consumer support websites, clinics, emails to ANZICA, Reproductive Technology Council of Western Australia, ITA (pre-VARTA)	To examine the views of donors, recipients, and DCP on donor information and donor's feelings about being contacted
Speirs (2012)/UK	RR = UTD n = 15; all ♂	Donated between late 1960s - early 1980s, 93% married at time of study	SD anonymous	Qualitative explorative	Interview	Convenience, opportunity, snowballing; ad placed on Doctors.net	To explore the meanings of kinship and genetic knowledge of SD
van den Akker et al. (2015)/UK	RR SD = 32%, OD = 71% n = 26; 21 ♂, 5 ♀	SD M age = 55 years (SD = 8.95) OD M age = 56 years (SD = 4.14), 39% of SD and OD combined were single	SD and OD former anonymous	Quantitative descriptive, comparative	Questionnaire[a,b] with closed-ended questions	UKDL—voluntary funded registry	To explore DCP's and donors' experiences who are searching for a genetic link through the use of a DNA-based voluntary register service

TABLE 2

Continued.

Author/year of publication/location of research	RR/sample size and sex	Age/demographics	Type of donor	Research design	Data collection	Recruitment	Research aim
Visser et al. (2016)/NL	RR = 38% inactive donors, 100% active donors n = 25; all ♂	Former donors (n = 18): M age = 48 years (18–64), 67% own children; Active donors (n = 7): M age = 41 years (33–43), 57% own children	SD open-ID	Qualitative explorative	Semistructured interview	Clinic	To explore how identifiable sperm donors feel about psychosocial counseling

Note: ANZICA = The Australian and New Zealand Infertility Counsellors Association; AUS = Australia; BE = Belgium; D = Germany; DC = donor-conceived; DNA = deoxyribonucleic acid; DSR = donor sibling registry; ED = embryo donation; FI = Finland; HE = heterosexual; ITA = Infertility Treatment Authority; KID-DNA = Kunstmatige Inseminatie Donorzaad [Artificial Insemination Donorsemen] deoxyribonucleic acid; open-ID = open-identity; LE = lesbian; LGBT = lesbian, gay, bisexual, and transgender; M = mean; Md = median; MMR = mixed methods research; NL = the Netherlands; OD = oocyte donation; RR = response rate; SD = sperm donation; SE = Sweden; SMC = Single Mothers by Choice; UK = United Kingdom; UKDL = United Kingdom donor link; USA = United States of America; UTD = unable to determine; VARTA = Victorian Assisted Reproductive Treatment Authority.

Funded = publicly funded by government, state or regulator.

Former anonymous donors = those who have chosen and/or are required—due to regulatory changes—to be identifiable to DCP and parents in some cases.

[a] The use of self-constructed study-specific questionnaires or no reported information on measurements and reliability.

[b] The use of questionnaires with information on validity and reliability.

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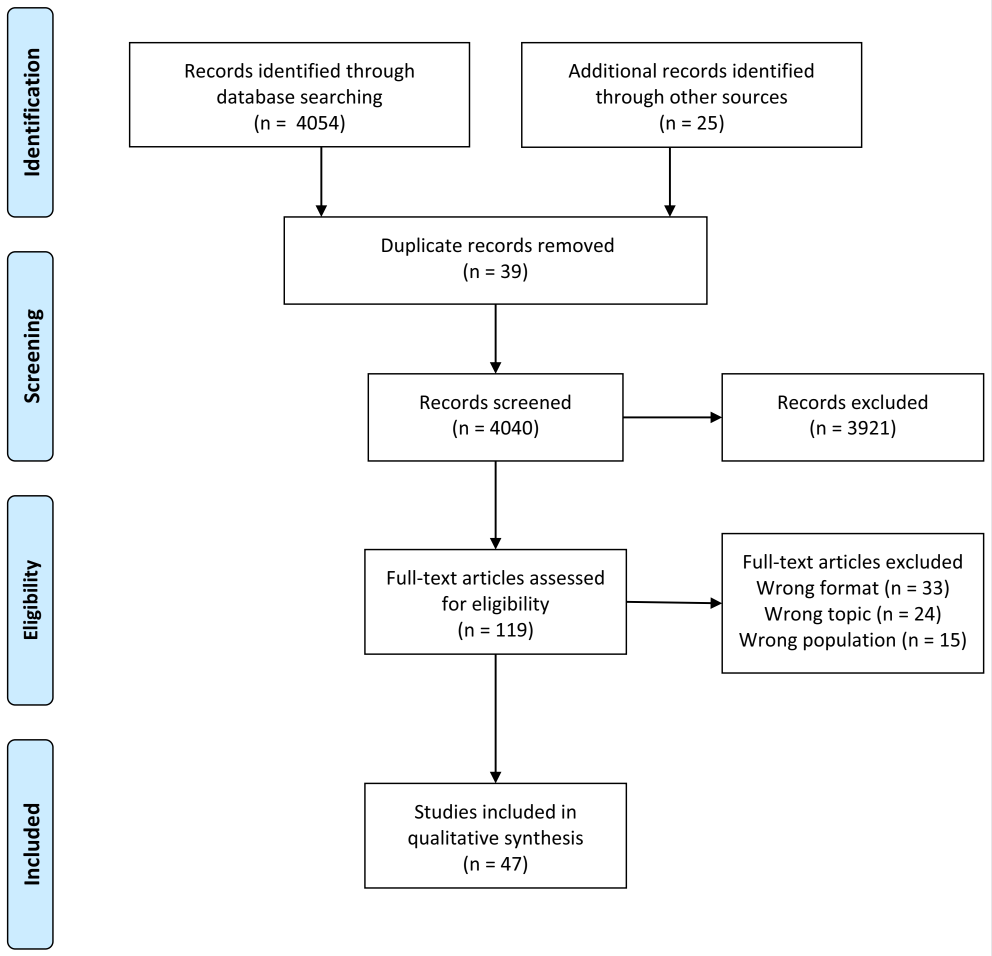
on linking people connected through donor conception (e.g., donor sibling registry and support groups; 18/47) or linking registries (e.g., donor conceived register, VARTA registries, The Sperm Bank of California's family contact list, The Sperm Bank of California's identity-release program registry, and Fiom KID-DNA database; 12/47). Eleven studies (11/47) recruited participants from fertility/gamete donation clinics. This last source was mainly used in studies focusing on donor perspectives. The remaining 6 studies (6/47) used various methods, such as convenience samples, general advertisements, or a combination of clinic and general recruitment or convenience samples. These recruitment sources created a bias, in that they primarily focused on those interested in information about the donor/donor relations. Further, little is known about why those eligible to participate decided against participation.

Sample sizes and response rates. The quantitative studies' sample sizes varied widely. The samples sizes in the studies of DC people were between 23 and 488, those of parents were between 14 and 2217, and those of donors were between 26 and 358. Although a large sample size can support the strength of the findings, response rate also contributes to the study's strength. Studies with the 2 largest sample sizes of DC people (488 and 314) and parents (2217 and 1700) did not provide a response rate, reflecting their recruitment strategy (e.g., combining recruitment using websites open solely for members with recruitment using websites with open access). The response rates in studies recruiting from the Donor Sibling Registry (which requires membership) were generally lower (12%–25%; mean = 19%) compared with the response rates in studies recruiting from funded registries (37%–73%; mean = 59%) or clinics (43%–100%; mean = 77%]. Low response rates introduce an additional selection bias. The qualitative studies' sample sizes varied from 3 to 50 across the 3 groups. The average sample size was 17 for studies of DC people, 27 for studies of parents, and 22 for studies of donors. With the exception of Visser et al. (40), who determined the sample size by interviewing until saturation, little-to-no information was provided on sample size determination.

DC people. With the exception of 3 studies (35, 41, 42), female participants outnumbered male participants in the other studies. There was considerable variation in DC people's age, ranging from 9 to 74 years. In majority of the studies (n = 17), DC people were over 18 years of age, and 4 studies included only minors. In 2 studies (15, 42), all participants had an open-identity donor. Majority of DC people were conceived through sperm donation from an anonymous donor. Only 2 studies (34, 43), reported a small proportion of participants conceived through egg donation. Beeson et al. (44) explicitly mentioned the exclusion of people conceived through egg donation because of the low numbers.

Parents. Most studies concerned families, of which majority had been assisted by sperm donation, with only 2 (45, 46) solely reporting families after egg donation. Seven studies specifically reported families parented by single mothers and/or female same-sex couples. Overall, families with single mothers or same-sex couples as parents outnumbered those

FIGURE 1



Identification and selection of publications for the systematic review.

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with heterosexual couples as parents. This reflects the current patient population, in which >50% are families without male parents (31). Majority of the parents had underage children. Only 2 studies included some parents with adult children (47, 48). In most studies, the participants were the genetically related parents of the DC person; only 2 studies (45, 49) included genetically unrelated parents. The inclusion of genetically unrelated parents is important because they may respond differently to potential contact with donor relatives, for example, with the feeling that it might question their validity as a parent (50).

Donors. Ten studies reported only sperm donors, with 2 solely reporting egg donors and 9 reporting both sperm and egg donors. With the exception of 3 studies (32, 33, 51), sperm donors outnumbered egg donors in the other studies. Majority of the studies included donors who donated anonymously; 4 studies included only open-identity donors. The age range of the sperm (18–78 years) and egg donors (24–61 years) varied widely.

SYNTHESIS OF THE FINDINGS

We have presented the research findings below, organized according to stakeholder group. Nonetheless, we recognized that the groups, associated motivations, and potential influencing factors are intertwined and influence each other. Note that any interpretations of the findings in this section were derived from the review of the studies themselves.

DC People

Across the studies, DC people expressed a strong interest in and/or sought contact with the donor and/or same-donor families, as evidenced by the amount of information wanted by DC people, as well as their active search for those to whom they were related through donor conception. Many also expressed a desire for an ongoing contact. For referring to DC people who share the same donor, we have used the term “same-donor peers” instead of “donor half-siblings” because it does not lead to assumptions about social and genetic relationships but remains open to how people give meaning to these relationships.

Who were they searching for? DC people searched for the donor and/or same-donor peers in various ways. They could be interested in only one or the other (52, 53); in other cases, an interest in the donor was closely related to an interest in same-donor peers (42, 52). The search could be very specific (e.g., for the donor) but could result in others (e.g., same-donor peers) being found (54, 55) because of the search method used (e.g., voluntary register). In formal registers, participants defined by default who they sought (29); in informal voluntary registries or online ancestry services, this could not be specified upfront.

Motivations

Interest in and searching for the donor. Across the studies, *curiosity* most often motivated the participants to search (15, 27, 29, 35, 41–44, 51–53, 56, 57). Although "all information" could be deemed important (51), specific motivations were repeatedly observed. Donor-conceived people wanted *to understand where their traits came from*, know what the donor looked like, and know if they shared similarities, potentially in source traits not shared with their family (15, 27, 29, 35, 41, 42, 56, 57). They also wanted information to help them *better understand themselves*, such as what the donor was like as a person and what their personality was like (26, 27, 29, 57–59). Getting that information could help fill a void and help identify and/or assess their own defining characteristics and abilities. This information was sought not only for themselves but also to have this genetic information for their own children, suggesting that such information may serve a purpose beyond the DC person (26, 52, 57). Donor-conceived people also wanted to know the donor's motivation to donate *to complete their life story* (42, 43). They wanted ancestry information (27, 41, 44, 55, 57) *to map out their ancestral history* and be able to situate themselves among their group of genetic relatives. They also searched *for medical information,* wanting to know about potential hereditary diseases (both for themselves and their children) or to explain a previously experienced illness (16, 27, 29, 44, 52, 54–57). For some DC people with an anonymous or unavailable open-identity donor, searching was important *to regain agency* over information they felt was theirs (15, 52, 55, 58). Others searched because they were interested in having a relationship with the donor (29, 42, 44, 57, 59), especially if it was of mutual interest; however, this was not as common a motivation as the others cited previously (42, 44, 57). The other reasons mentioned were *to thank them* and for the *donor to know them* (15, 43, 44, 52, 57). The findings were similar for people conceived through sperm and egg donations, regardless of whether the donor had an open identity or was anonymous.

Interest in and searching for same-donor peers. Whether intentionally searching or unintentionally discovering, DC people expressed an interest in learning more about same-donor peers (27, 42, 51, 55, 57, 59). The 2 most commonly reported motivations focused on *learning donor-related information* and *forming new relationships* (53). Resemblance with same-donor peers, shared traits, and character could provide *identity-relevant information*. Furthermore, this information could create *a sense of belonging* to their donor's origin (26, 27, 57). The participants also reported an interest in the potential *to form relationships and extend their family networks*. For DC people raised without siblings, finding same-donor peers might help *fill a "missing" role in their family* (26, 29, 42, 52, 53). Finally, some participants sought potential medical information and/or wanted *to avoid consanguineous relationships* (51, 52, 54, 55).

Influence on motivation

Sex. With few exceptions (35, 41), women, compared to men, expressed more interest and sought information and contact with same-donor relations more often (15, 24, 27, 52). The limited explanations were that women may be more emotionally engaged in linking and are the custodians of family knowledge (56). This gender bias was absent in families parented by female same-sex couples, where men may have shown a less gendered behavior and more interest in exploring social and kin networks (15).

Age of disclosure/current age. It is difficult to explore the influence of the age of disclosure on interest in donors and/or same-donor peers because it is often closely related to family type and current age (52). For example, DC people who learned about their donor origins at a young age were more likely to be from same-sex two-parent families (44) and also made up a larger proportion among younger study participants who expressed an interest in the donor (57). With these confounders in mind, the following observations were made. Beeson et al. (44) found that DC people from same-sex families (i.e., those who had learned about their DC status at a young age) expressed an interest in contact with the donor at a younger age more often than DC people from heterosexual couple families (i.e., more likely to have learned at a later age) (44). Another study that compared DC people based on their current age and the age of disclosure found that older respondents and those who had learned about their donor conception later in life were significantly more likely to want to contact the donor than younger DC people (57). The age of disclosure might be associated with the timing of interest in the donor.

When we focused on motivations to search for and/or contact the donor, some differences were seen between age and the age of disclosure (52, 57). Donor-conceived people who were older and those who learned about their donor conception after the age of 21 years were significantly more likely to view the donor as "a source of information" about themselves, their health/medical history, or their ancestry (57). On the other hand, DC people who learned about their donor conception before the age of 18 years searched out of curiosity and a desire to meet the donor (52). Seeing the donor as a source for information or medical motives for their search was less prevalent in this group. Hertz et al. (57) suggested that these findings could be understood using a general developmental process, with interest in both genealogy and medical information becoming more important as people age.

Psychological functioning/well-being. People with donor origins have been studied in relation to their psychological functioning. A limited number of studies have also examined how it might be related, if at all, to an interest in one's donor origins and donor-related people. In a group of 7- to 17-year-olds, Vanfraussen et al. (35) found no differences in self-esteem and emotional and behavioral functioning between those who wanted information about the donor and those who did not. Vanfraussen et al. suggested that these findings could be explained by the fact that the participants knew about their donor origins from a young age. As they grew up with this knowledge, being DC was neutral to them (35). Other studies (42, 43) also found that teenagers who did not report psychological distress about being DC still showed an interest in knowing the identity of their donor. These initial findings suggested that an interest in the donor and other donor relatives was not related to the DC person's well-being. Van den Akker et al. (27) measured the aspects of another psychological construct, identity, in a group of DC adults and donors in a linking registry. The DC adults did not differ from the donors and a comparison sample of Americans who did not undergo in vitro fertilization in terms of the personal and social aspects of identity. They did, however, score lower on collective identity, an aspect of identity that is based on associations with or feelings of belongingness to a group, including one's family (27).

Overall, these findings, albeit preliminary, suggested that an interest in one's donor origins was not associated with psychological functioning but did not exclude possible differences in the DC people's sense of identity.

Family type. Several studies have indicated that family type is associated with an interest in the donor and/or same-donor peers. Donor-conceived people with an open-identity donor from single-mother families, compared to those from two-parent families (female same-sex and heterosexual couples), expressed significantly more interest in and were more likely to plan to contact the donor in adolescence and requested the donor's identity as young adults more often (15, 42). Scheib et al. (42) found an association between the mere presence of coparents, regardless of their sex, and less interest in the donor among DC adolescents. Comparing two-parent families, 1 study (57) found significantly more interest in contacting the donor among DC people from heterosexual two-parent families than those from same-sex two-parent families despite controlling for participant age at the time of disclosure and age at the time of study participation (59). The investigators pointed out that further exploration is needed.

Some differences in DC people's motivations for searching and/or contacting the donor were mentioned between family types: among DC people with an anonymous donor, those from a single-mother family were more interested in a relationship with the donor than those with 2 parents (44). Additionally, they were significantly more likely to search for same-donor peers for possibly finding new family members than DC people from other family types (52). Two other studies (44, 57) comparing two-parent families observed that DC people from heterosexual two-parent families more frequently identified "ancestry" and "medical information" as motivations for searching for their donor when compared to DC people from same-sex two-parent families.

Family relationships and functioning. In contrast to the section Family Type, where the researchers assessed differences *between* families, other researchers focused on what happens *within* families with respect to family relationships and family functioning. Few studies have assessed family relationship quality in relation to an interest in the donor. Vanfraussen et al. (35) found no statistically significant relation between parent-child relationship quality and DC people's interest in the donor. Similarly Kelly et al. (29) observed that DC people could have a positive relationship with their parents and positive family life and still be interested in the donor.

Using another measure of parent-child relationship quality, Lozano et al. (34) found that DC people with high levels of attachment-related anxiety toward their genetically related parent expressed more curiosity about their donor origins. They were not, however, more likely to search for or contact the donor.

Researchers have also focused on the influence of parental feelings about or reaction to their child's interest in the donor and its effect on the DC person's search for their donor. Several studies (35, 42–44, 52, 54, 57) reported that some DC children/people anticipated the sensitivity of the topic for their parents. They did not want to hurt their parents by expressing an interest in the donor. Some DC children/people felt that their parents were less able to react appropriately or sympathetically to their interest, and they could not discuss the situation with them (52). These concerns were most often reported in relation to the genetically unrelated parent (44, 52), especially the father. There still remains the question of how sensitivity and/or responsiveness influence not only the expression of curiosity but also the actual search activity. In an initial study (42), no statistical relation was found between the parents' expected reaction and the youth's likelihood of requesting their open-identity donor's identity. Donor-conceived people can still search for the donor in the absence of family functioning difficulties, but they are cognizant of the potential effect their search can have on their relationship with their parents.

(Professional) Support Having mental health support available throughout the linking process was found to be important even if the services, such as professional support, intermediary services, or therapeutic counseling, were not used (16). A "mediator" or "support person" was perceived as helpful when there was little social precedence, such as navigating contact with the donor (29). However, despite the DC person's preference for counseling, depending on the context, it was not always available and could not be funded for or the professionals available had limited experience with donor linking (16, 17). Contact with other DC peers was also reported helpful but had the potential to be disappointing or upsetting when their experiences were different (3, 16, 55).

Parents

The reported interest and searches suggested that parents anticipated, rather than responded to, their children's requests for information and/or possible contact with the donor and/or same-donor families. Only 13% of parents in a study by Freeman et al. (60) acted because their child had asked them to, and only a third had told their child about their search (47). Most participants had children under the age of 10 years, with 1 study including small numbers who were pregnant or trying to conceive.

Who were they searching for? Parents searched for the donor, same-donor families, or both. The studies from the donor sibling registry suggested that parents sought other families more often than they sought the donor (24, 60). It is possible, however, that reports on who was sought were influenced by the fact that there were usually multiple same-donor families to be found compared to only 1 donor (48, 60). Additionally, the type of registries available might also have influenced who was found. For example, some registries focused more on contact between the donor and DC person, whereas others focused on bringing families in contact with each other. When assessed, the parents found or were in contact with a range of 1 to >20 families (24, 37, 50, 60).

Motivations

Interest in and searching for the donor. Parents reported *being curious* about the donor and wanting information, very often with a *pre-emptive* tendency, such as ensuring access to information in the future (31, 47, 56). The interest could have been situated in a more general belief that *having more information and being open* was inherently better for the child (30). Most often, parents sought information to answer their child's potential questions: for example, about the donor's life and personality, their name, and reason for donation. These can help create an image of the donor as a person and give the child clues to shared characteristics, *enhancing their sense of identity and origin* (30, 49, 51, 56, 60). Parents commonly prioritized update of *medical information*; some reported wanting the ability to contact the donor about medical issues (31, 46, 47, 51, 60). Nonidentifying information might not completely satisfy the interest or need. In one Australian study (49), information about *health status* and *the donor's name* consistently ranked highly among parents (majority of whom had anonymous donors), DC people, and donors. In addition, relative to parents who had not disclosed, parents who had disclosed to their children rated the importance of both nonidentifying and identifying information significantly higher overall, leading the investigators to conclude that the importance of information may not be as apparent initially (51). In another study (47), parents wanted the donor's identity to safeguard the information in anticipation of their child's contact needs. Others wanted to express their *gratitude toward the donor* (31, 46, 47, 60). With the potential for contact between the donor and DC people, parents reported being concerned and wanting to know what the donor was like *to feel more prepared and/or confident about the contact* (47, 49). Although some parents reported wanting to meet the donor, the interest in forming a relationship varied between studies, from a very small (60) percentage to a larger percentage of participants (56) expressing an interest.

Interest in and searching for same-donor families. The 3 main motives were related to "curiosity," "child's identity," and "to create kin." Parents were *curious* about similarities in physical traits, personality, and interests between their child and children from same-donor families (14, 24, 37, 50, 60). The parents believed that finding same-donor families could also help their child have a better understanding of who they were or would help their child *attain a more secure sense of identity* (14, 50). Contact with same-donor families could also give their child *"a sense of kinship"* and the possibility *to create a larger extended family* (14, 37, 50, 60). Sometimes, parents specifically mentioned "to provide my child with a sibling" (24, 50). They felt that the genetic connection was important, or may be important, to their children in the future (14, 24, 47, 50, 54). Other motives related to *creating a (future) support system* for the child or themselves. Through contact with others who shared a similar experience (i.e., being DC, not having a father, or being a single parent), parents wished to alleviate their child's and their own sense of aloneness, even if it was pre-emptively (14, 47, 50). The motives were also related to *medical reasons* (24, 31, 37, 46, 50, 60): to know if same-donor children could be a "medical insurance policy," to help their children avoid consanguinity, or to ask other families if they had encountered similar psychological or developmental challenges with their children.

Differences in motivations for donors and same-donor families. There have been indications that parents have different reasons for searching for and/or contacting the donor rather than contacting same-donor families. Freeman et al. (60) pointed out that "knowing *about* the donor was deemed to be more important than knowing the donor." Parents saw the donor as a provider of information rather than someone who would become a part of the family, whereas an interest in and searching for same-donor peers or families often seemed initiated by a motivation to "create an extended family" (14, 24, 37).

Influence on motivation

Family type. Several studies found that more single mothers were interested in or reached out to the donor or same-donor families compared with heterosexual two-parent families (47, 50, 56, 60). One study (14) comparing data from a donor program with the program's same-donor family-matching program statistically confirmed these observations but did not see the same difference when single mothers were compared with female same-sex couple parents. Single mothers were also more likely to cite providing "a more secure sense of identity" for their child in searching for both the donor and same-donor peers compared to two-parent families (29, 60). Several interpretations were suggested by the investigators to explain these findings: in a single-mother family, the donor does not challenge the position of the genetically unrelated parent, as might be the case in two-parent families; single mothers want to provide their child with a father; and contact with same-donor families may serve as an extended family that single parents do not have through a partner (30, 50).

Given the motivation "to create kin," and the observation that 88% of parents who searched "to have a sibling for their child" had 1 child (50), it was also expected that more families with only 1 child would reach out to or be interested in same-donor families than families with multiple children. Scheib and Ruby (14), however, found no support for this hypothesis: there was no over-representation of parents with only 1 child in the same-donor family-matching registry.

Socio-environmental factors. In one study (30), single mothers expressed pressure to live up to societal heteronormativity. They searched for the donor to find a "father" for their child so that the child was "like everyone else" and reduce the perceptions of the stigma of having a fatherless child. Importantly, however, there was no expectation that the donor took up a parent role.

(Professional) Support No research specifically focused on parents' support needs or support experiences. Scarce findings revealed that parents felt insecure about donor linking because of the lack of concrete information on how the process actually works (30, 31, 46), how counseling could help in preparing someone for possible contact with a donor relative, and how support could help in processing difficult emotions and negotiating appropriate relationships (31, 50).

Donors

Who were they searching for? In the past, donors were expected to be disinterested in the result of the donation process (61). Moreover, an interest was perceived as a contraindication to recruitment. However, studies have shown that donors are interested in the outcome of their donation (e.g., if and how many children born) and do think of the people they helped to conceive (25, 28, 33, 38, 40, 62–66).

In a Swedish study population, a large majority (approximately 85%) of identifiable donors wanted to know if any children had resulted from their donation (33), but fewer wanted to be alerted if a DC person was seeking them or information about them, with an even smaller proportion (29%) not wanting to receive such information (32). Until recently, donors were not in a position to request information about the people whom they helped to conceive. Initially, voluntary registers were established to aid DC people in their efforts to gain information about the donor (25). Although voluntary registries also create a possibility for donors to locate DC people, donors often described their search and contact as prioritizing DC people's or parents' needs (28, 29, 39, 56, 67). Of note, only in the state of Victoria (Australia), donors are legally allowed to access their DC offspring's identifying information (29).

Motivations The findings often revealed 2 types of motivations for donors to become identifiable, which were classified by Bolt et al. (68) as DC person-oriented and donor-oriented motivations. In the category of DC people-oriented motivations, donors wanted to help people who were conceived through their donation. These motivations could have a "*moral- or rights-based position*" (62), reflecting the right of DC people to have access to information about their origins (such as "understanding DC people's request for information," "creating possibilities to exchange [physical, social, and medical] information when the DC person requests it," "feeling that a DC person has a right to information," and "the donor is morally obligated to make him/herself identifiable"), or a "*welfare- or needs-based position*" (62), which reflected the feeling that having no access to information could be potentially harmful (25, 27–29, 32, 39, 40, 56, 62, 64, 66, 68, 69). A specific motivation mentioned by 3 of 6 donors in the study by Kelly et al. (29) was that they saw themselves as "protectors of the child's right to know." This finding was specific to Victoria, Australia, the only region where donors can initiate the linking process, which in turn can help inform a DC person of their origins if they were unaware. *Donor-oriented motivations*, on the other hand, are about the donor's interest. Donors frequently cited being curious about the people they helped to conceive, such as how they were faring and/or about similarities and shared traits (27, 28, 38, 40, 62, 63, 66, 68, 69). They also cited wanting "to fill in the gaps in their own life" (29) or "to make me feel more complete" (27). Sometimes donors sought contact with DC people to get information about their own family (25, 27, 62, 64, 66). Although child-centric motivations prevailed over donor-centric motivations (68), several studies showed that information exchange and contact was potentially fulfilling for donors as well (30, 62, 68).

Influence on motivation

Sex. There was some variance in motivation between sperm and egg donors. Former anonymous egg donors more often cited "wanting to pass on information to their own families," whereas more anonymous sperm donors than egg donors were motivated by curiosity about genetic relations through donor conception (25). The data also suggested that sperm and egg donors (both identifiable and anonymous) perceived the people conceived by their donation differently. No difference was found between identifiable sperm or egg donors in terms of attitude toward being contacted by their offspring in the future (32, 33), but sperm donors were found to be significantly more engaged with their potential offspring than egg donors. They showed more interest in how their potential offspring were doing and felt more responsibly toward them (33). Nelson and Hertz (65), however, reported opposite findings: anonymous egg donors expressed feelings of "concerned responsibility" and wondered how the child was faring, whereas sperm donors had a feeling of "prideful lineage."

Having children. Although some studies reported that for some donors, becoming a parent themselves triggered them to make themselves identifiable (25, 38), other studies could not statistically confirm an interest in contact or perceived involvement in potential donor offspring to be different between donors, regardless of the experience of biological parenthood (32, 33, 67).

Family status. A donor's decision to donate and become identifiable holds implications for others in the donor's life (28). Partners tended to be informed of the decision, but parents and children were told less often (25, 28, 39, 46, 66). There were a variety of reasons for not telling: children were too young to be told, it was only necessary when a meeting with a DC person would take place, concerns about the effect on children, or fear that their children might disapprove of donation. Yet, in several studies, the partners and children of donors were supportive of identifiability and contact with DC people (28, 38, 68). Although some donors were open to the possibility of DC people meeting their own family

(32, 38), there was more caution noted when their children were younger (67). Notwithstanding, it could be challenging for donors to manage concerns about the potential adverse impact it may have on their families and the rights of the DC person. Boundary setting was, therefore, a major task (28, 52, 69).

External influences. Media can influence donors' interest in or openness to contact by publishing DC people's experiences, thereby increasing the salience of being unable to access information about origin and providing options on how to make themselves identifiable (25, 29, 38, 39, 66, 68, 69). Governmental/public encouragement to participate in a voluntary register also promoted identifiability (47, 68).

The way linking is conducted/organized can also influence a donor's feelings regarding linking. For example, some were worried about the risk of "false-positive" results when undergoing DNA tests (16, 25). Others emphasized a "need for control" over the information-sharing process and any subsequent contact (62, 66).

Donors expressed various concerns about the consequences of registering, for example, about the possibility of contact and its potential for donors "finding out more than they anticipated" and the potential for finding nothing (25, 28, 64). There were also worries expressed about how to navigate these new relationships, such as anticipating possible financial, legal, or emotional difficulties regarding contact (39, 64); uncertainty about the emotional demands of linking, such as possible rejection; disappointing DC people (25, 28); uncertainty about the type and level of contact (25, 67); and the potential impact on themselves and those in their lives (27, 38, 46).

(Professional) Support Donors reported that professional support services might be valuable in different phases of the linking process, such as the decision to become identifiable, the decision to register in a contact registry, how to disclose registration to their family members, handling future contact with people conceived through their donation, and/or managing several donor offspring requesting contact (16, 25, 32, 40, 62, 65, 67). Support could serve as an intermediary: a go-between in any situation in which the donor can be provided with a range of options to exchange information while retaining a sense of control (16, 62). Support from other donors and the sharing of experiences was also mentioned as helpful by some (16). If organized professionally, support can be best offered by mental health professionals who are familiar with the nuances of donor conception and linking (32, 62).

DISCUSSION

This paper provides a systematic review of the factors associated with an interest in and a search for people related through donor conception among DC people, parents, and donors. The conclusions are tentative in light of the limited existing research and methodological limitations. However, the data offer some important information.

The findings regarding linking between donors, recipient parents, and DC people reflected their interest in each other, with differences in motivations, desired information, and/or expectations regarding contact. Donor linking occurs in a complex array of several factors: psychosocial, sociodemographic, relational, and environmental variables. Additionally, this review indicated that donor linking has the potential to meet not only DC people's needs but also donors' and parents' needs.

Reviewing the literature on all 3 stakeholder groups (DC people, parents, and donors) and their interest in each other gave a sense of the extended networks of relationships that can be created. A better understanding of these processes, motivations of the invested parties, and impacts on both individuals' relationships and networks can help health professionals and gamete donation programs better support those involved (28).

Limited findings have revealed DC people's and donors' desire for professional support during the linking process. Insecurity about how to negotiate contact and the lack of an established script to follow made the contact process challenging. Psychosocial or mental health support in the form of implication counseling and/or mediation, provided by those with an experience in donor conception, can be of assistance (16, 70–72). This can be a challenge to provide in settings that are not governmentally or programmatically funded and rely on volunteer peer support (16).

Strengths and Limitations

The studies reviewed here have several methodological limitations. A self-selected sampling bias was observed. The studies included only those who were interested in and/or sought contact with others. Although some studies (14, 24, 30, 37, 45, 47, 48, 50) have described incidental findings regarding those who did not search for the donor, little research is available about those who did not seek and/or contact donor-related people. Research about those who did not search is necessary to understand differences and/or similarities between the 2 groups and how their needs and motivations might differ.

Another shortcoming concerned the limited variation in recruitment sources. Frequent data collection from the same sources limited the representativeness of the population. More variation in recruitment sources can lead to a more diverse research population and thereby increase generalizability of the findings. In addition, the findings mainly represented the views of those of European descent and those with Anglo-European cultures. These findings cannot be generalized to those who speak Spanish language, those with Latin American cultures, developing countries, Asia, or Africa.

Recommendations for Future Research

Several studies have found that in addition to information, DC people often wanted contact and some wanted a relationship should they find the donor or same-donor peers (27, 56, 57, 59). However, early findings showed that these contacts could be positive (14, 52, 60) and lead (in various degrees) to an ongoing contact and new relationships. Follow-up research is needed on what happens after the parties are linked, including research on who wants and who does not want contact, how people decide to establish contact, the nature and quality of contact and relationships that develop, how these new relationships are perceived (e.g., as friends, families, or something else), and how roles and family boundaries are managed.

Until recently, the donor was not seen as a participant in the process, "rather as a means to an end" (73). In the linking process, donors are generally given, and they assume, the passive position of being available for DC people (74). In contrast, the review suggested that donors might want to connect with parents and DC people; this merits additional exploration (29, 75).

Donor linking and information exchange affects not only the donor and DC person but also the families of both the parties (28), sometimes leading to a network of relationships. Research on this "networking" process, its challenges, and how participants navigate these processes is important.

Donor-conceived people have been shown to share the challenges of building relationships with potentially large numbers of same-donor peers (26, 37). Continuous expansion of such groups can lead to differences in when people join the group. The timing of joining with same-donor peers/families can affect how relationships are formed, with earlier-linked families more likely to connect and finding it difficult to form new relationships with later-linked families (24). Further research is needed on how people manage these new situations and their psychological impact.

To methodologically strengthen research in the field of donor linking, the following possibilities have been suggested. First, in addition to including those not interested in donor information, efforts can be made to expand recruitment sources to reach participants outside popular donor conception consumer groups. Moreover, increasing variation in viewpoints by including the experiences of DC people resulting from oocyte and embryo donations, genetically unrelated parents, and embryo donors will contribute to a better understanding of the interest and experiences associated with the donor-linking process.

Recommendation for Current Clinical Practice

The findings of the review revealed that an interest in the donor was not a sign of distress, low psychological functioning, or family dysfunction, it was rather a commonly shared interest among DC people. Further, DC people tended to be attuned to their parents' needs and feelings when engaged in the search. This information can be reassuring to parents and help them be more comfortable and receptive to their children's questions and interest in the donor and donor-related people.

Although in the past, a donor's interest in the DC offspring was seen as a contraindication for donation, this review showed that it was not uncommon for donors to have their own reasons for learning about or contacting their DC offspring. Donors can benefit from counseling that includes a discussion of their own needs (including their families') and wishes in the donor-linking process.

Moreover, donor linking not only concerns DC people and donors but also has implications on a wider network, such as for the parents involved, those who make decisions for their children sometimes, donors' family, other same-donor families, and others. Therefore, counseling should include a discussion of how donation can impact the wider involved network.

Psychosocial support for people engaged in donor-linking is in its early stages. In the long term, we need to carry out research on clinical practice and professional recommendations for managing linking. Counselors will benefit from an opportunity to be educated about the growing phenomenon of donor linking (e.g., knowledge of balancing different expectations and managing the continually expanding group of same-donor peers/families).

The review raised some questions at the policy and practice levels. Given the interest in contacting donor-related people, donor programs and clinics may benefit from creating program policies in response to those seeking information and contact, even in jurisdictions that permit anonymous donation. In addition, direct-to-consumer genetic testing and internet facilitate and increase linking opportunities. One possible outcome is that parents with young children or underage DC people find and contact the donor. In this way, they can bypass legal and program-based age minimums regarding donor information release. At present, we know little about the effect of contact between donors, families, and underage DC people. Further research is needed, and it is critical to assess these developments at a policy level. With these increased linking opportunities, another possible outcome is that DC people and donors are confronted with a large group of donor relations (18). This can be overwhelming for all parties and again raises the question of whether there should be limits on the number of families formed from one donor.

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