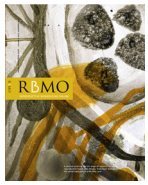
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REVIEW

Couples' interpersonal dynamics and relationship quality in donor-conceived families: a systematic review



BIOGRAPHY

Chiara Fusco is a Clinical Psychologist and a PhD Candidate in Psychology, Linguistics and Cognitive Neuroscience at the University of Milano-Bicocca, Italy. Her research focuses on family functioning and interpersonal dynamics in families formed through assisted reproductive technologies with and without gamete donation.

Chiara Fusco*, Pietro De Carli, Filippo Fusoni, Alessandra Santona

KEY MESSAGE

Three decades of research on couples conceiving via gamete donation show generally good interpersonal psychological functioning and high relationship satisfaction. Key issues that emerged include relationship satisfaction, stability, intimacy and agreement on family matters such as disclosure of donor conception. This highlight areas for future research and clinical considerations for gamete recipients.

ABSTRACT

This systematic review examines the interpersonal dynamics and relationship quality within couples who used gamete donation (spermatozoa, egg, embryo or double donation) to conceive a child. The review has been conducted following PRISMA guidelines and synthesizes in a narrative report the findings from 46 studies conducted across 10 countries, focusing on both same-sex and different-sex couples who used assisted reproductive technology (ART) with donated gametes. Key themes identified in the review include relationship satisfaction, stability, intimacy and the partners' agreement on relevant family issues, such as the process of disclosure to children. Gamete-recipient couples generally exhibit high relationship stability and quality, comparable to other family forms, including those formed through adoption, non-donor ART or natural conception. Higher relationship satisfaction was associated with lower levels of parental conflict and stress, contributing to healthier family dynamics. While the disclosure of donor conception did not directly affect relationship quality, agreement and decision making on disclosure emerged as key factors linked to relationship dynamics within the couple. Gamete-recipient couples show adequate relationship quality, comparable to other family forms. Future research should examine the long-term effects of disclosure, intimacy and dyadic adjustment to better support these families.

INTRODUCTION

In the landscape of new assisted reproductive technology (ART) techniques, families formed through donor conception have contributed to challenging the conventional understanding of family and kinship as rooted in a biogenetic connection (*Finkler, 2001*; *Golombok, 2020*; *Schneider, 1980*; *Strathern, 1992*). In this context, donor-conceived families are defined as those families formed by a single parent or a couple opting for oocyte donation, sperm donation, embryo donation and double-gamete donation to conceive a child through ART treatments (*Cahn, 2013*; *Zegers-Hochschild et al., 2017*).

Specifically, the aim of the present review is to address the interpersonal dynamics and relationship quality in gamete-recipient couples who conceived through ART.

In the past, the asymmetry in genetic relatedness to the child, with one intended parent having a genetic connection to the

Department of Psychology, University of Milano-Bicocca, Milan, Italy

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KEYWORDS

Assisted reproductive technology
Donor-conceived families
Gamete donation
Interpersonal dynamics
Relationship quality

offspring while the other does not, has raised concerns about its potential adverse effects on the couple's relationship, particularly in families with different-sex parents (*Department of Health and Social Security, 1984*; *Edelmann, 1989*). More recently, research has found that both men and women from infertile heterosexual couples seem to hold negative perceptions of using donor conception, particularly donor spermatozoa, as they believe it could have detrimental effects on their relationship (*Eisenberg et al., 2010*; *Fauser et al., 2019*; *Hudson et al., 2009*). These concerns include fears of marital conflict, diminished joy associated with childbirth, and societal judgement questioning their parenting abilities. These feelings appear to be more pronounced with donor spermatozoa than with donor eggs, possibly reflecting societal emphasis on paternal genetic relatedness (*Eisenberg et al., 2010*).

Additionally, lesbian-parent families may experience feelings of jealousy or competitiveness from the non-genetic mother, often directed towards the gestational/genetic mother or, in some cases, the donor, due to perceived differences in biological connection to the child (*Geerts, 2025*; *Lingiardi et al., 2016*; *Zadeh et al., 2016*). This can add complexity to the couple's relationship dynamics and underscores the importance of open discussions about the role of genetics within the family (*Geerts, 2025*; *Siermann et al., 2023*; *Zadeh et al., 2016*).

The quality of a couple's relationship is closely linked to overall family functioning (*Gebhardt et al., 2017*; *Mulsow et al., 2002*; *Zanchettin et al., 2022*). In the psychological literature, terms such as 'relationship satisfaction', 'couple adjustment' and 'relationship quality' are often used interchangeably. These concepts broadly refer to how individuals perceive and adapt to their intimate relationships (*Delatorre and Wagner, 2020*; *Morry et al., 2010*). Scholars have assessed relationship quality by examining interaction patterns between partners and their internal representations of the relationship (*Acitelli et al., 2008*; *Farooqi, 2014*). As noted by *Delatorre and Wagner (2020)*, evaluating relationship quality requires considering multiple dimensions. This multidimensional concept can be understood as a dynamic process influenced by various events, circumstances and interactions that shape a couple's adjustment over time (*Spanier and Cole, 1976*). The outcomes of this process depend on several factors, including levels of conflict and interpersonal tension, as well as aspects such as satisfaction, intimacy and agreement on important life decisions (*Spanier and Cole, 1976*).

In this context, dyadic adjustment is defined as a multifaceted construct that reflects the overall quality and functioning of a couple's relationship and as the overall relational balance achieved by a couple, which, in response to life changes, must remain stable while also retaining flexibility (*Delatorre and Wagner, 2020*; *Spanier and Cole, 1976*). This balance corresponds to the couple's ability to face and overcome differences, individual and interpersonal concerns, while still ensuring mutual satisfaction, cohesion and agreement on the issues they deal with (*Spanier, 1976*). Relationship stability, on the other hand, pertains to whether a relationship remains intact over time, without dissolution through separation or divorce (*Lewis and Spanier, 1979*).

The current psychological literature investigating the quality of couples' relationships in donor-conceived families lacks systematic organization and comprehensive analysis. The quality of the couple relationship has important implications for other interpersonal dynamics that strongly influence the lives of donor-conceived families. These include disclosure to offspring about their genetic origins, the parent–child relationship in the context of managing genetic asymmetry, the long-term stability of the couple's relationship, parenting practices and children's developmental outcomes (*Chasapis et al., 2024*; *Duff and Goedeke, 2024*; *Indekeu et al., 2013*; *Isaksson et al., 2012*; *Rodino and Sanders, 2023*; *Shehab et al., 2008*).

CURRENT STUDY

These premises underscore the relevance of deepening the understanding of the processes regulating recipient-couples' functioning and interpersonal dynamics to ultimately broaden knowledge about the underlying psychological mechanisms that may inform partners' decisions and behaviours within donor-conceived families. Hence, the present study aims to review all the published articles analysing the interpersonal dynamics in couples who used gamete donation to conceive a child (i.e. couples using egg, spermatozoa, embryo and double-gamete donation). Since surrogacy involves specific financial, physical and psychological dynamics that may differ significantly from those in families formed through ART with donated spermatozoa, eggs or embryos, an analysis of families formed through surrogacy was not included in this study.

Thus, the first review aim was to integrate existing knowledge on relationship quality and interpersonal dynamics occurring at the couple level within same-sex (lesbian) and different-sex couples who used donor ART to conceive a child. The second aim was to point to areas of research about couples' functioning in donor-conceived families that need further investigation.

MATERIALS AND METHODS

This review follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (*Page et al., 2021*). A review protocol was developed and pre-registered with PROSPERO (International Prospective Register of Systematic Reviews) before the review was conducted the review (protocol number: CRD42023467339).

Search strategy

The article search through databases was conducted in July 2023 using the PubMed, PsycINFO, Web of Science and Scopus databases. The search strategies were tailored for each database and are detailed in the Supplementary Material. The initial search terms were developed based on key concepts identified through preliminary literature scans and expert input. These terms were tested and iteratively refined in selected databases to enhance the sensitivity and specificity, ensuring a comprehensive retrieval of relevant studies while minimizing irrelevant results. The final search strategy was peer-reviewed within the research team prior to systematic application across all databases.

No date restrictions were applied during the database searches. This decision was made to ensure the inclusion of all potentially relevant studies and to provide a comprehensive synthesis of the existing literature, particularly considering the absence of prior systematic reviews on this specific topic. Additionally, the reference lists of the included studies were reviewed to identify any further studies that met the inclusion criteria.

Inclusion and exclusion criteria

Articles included in the review had to meet the following inclusion criteria:

1) They were peer-reviewed quantitative, qualitative or mixed-methods original studies written in English, with the methodology described in detail.
2) The data clearly differentiated between donor and non-donor ART treatments, surrogacy, natural pregnancies and other paths through parenthood (for example, adoption).
3) Data had been collected from samples of participants having at least one donor-conceived child not exceeding 18 years of age.

Theoretical papers, meta-analyses, and systematic reviews were excluded, as were studies focusing on families formed through surrogacy due to the distinct experiences these families undergo compared with donor-conceived families.

Selection of the papers

Records were exported and processed with Rayyan, an AI-based tool, which was used to assist the authors in the deduplication and screening process (*Ouzzani et al., 2016*). Based on the search of the databases mentioned above, 15,160 records were found, of which 6455 were duplicates and therefore removed, leaving 8705 records. A total of 8638 articles were excluded based on the title and abstract. In total, 67 papers were assessed for eligibility. Of these, the full text was unavailable for two, and an additional 17 papers were identified through the reference lists of the selected studies. As a result, full-text screening was conducted on 82 records.

According to the inclusion criteria, 36 papers were excluded (FIGURE 1): 1 paper did not meet inclusion criterion 1 (because of the publication type); 7 articles presented wrong outcome variable(s) (not specifically focusing on the couple relationship); and 28 papers included samples of participants belonging to populations that did not fit the aim of the present review (including those who were still undergoing the ART treatments or were pregnant). Overall, 46 papers published between 1989 and 2023 met the inclusion criteria and were considered in the present review.

Two raters independently examined the studies that met the eligibility criteria, and controversies were solved through discussion with a third rater until a consensus was reached. The agreement between the two reviewers was assessed using both the percentage agreement and Cohen's kappa. A percentage agreement of 98.6% was observed for 10% of the total number of papers screened (870 papers), indicating a high level of agreement between the two reviewers. Additionally, Cohen's kappa was calculated to account for the possibility of agreement occurring by chance. The resulting kappa value of 0.82 suggests a strong agreement between the reviewers, as defined by *Landis and Koch (1977)*, where kappa values between 0.61 and 0.80 indicate substantial agreement.

Quality assessment

The quality of the studies included was assessed independently by two authors using the Joanna Briggs Institute's Critical Appraisal Checklist for analytical cross-sectional studies and qualitative research (*Lockwood et al., 2015*; *Munn et al., 2023*). The authors assessed each paper's methodological quality independently through the checklist, and any discrepancies were discussed until a consensus was reached. All the studies included in the review were assessed as adequate based on the checklist items.

Data extraction and analysis

Data extraction was carried out manually and data were recorded on an Excel sheet. The data extraction table (TABLE 1) reports the study design (authors, country where the research was carried out, year of publication, sample size and study participants), study methodology (types of measure of relationship quality or other interpersonal dynamics — qualitative or quantitative measures — and the specific

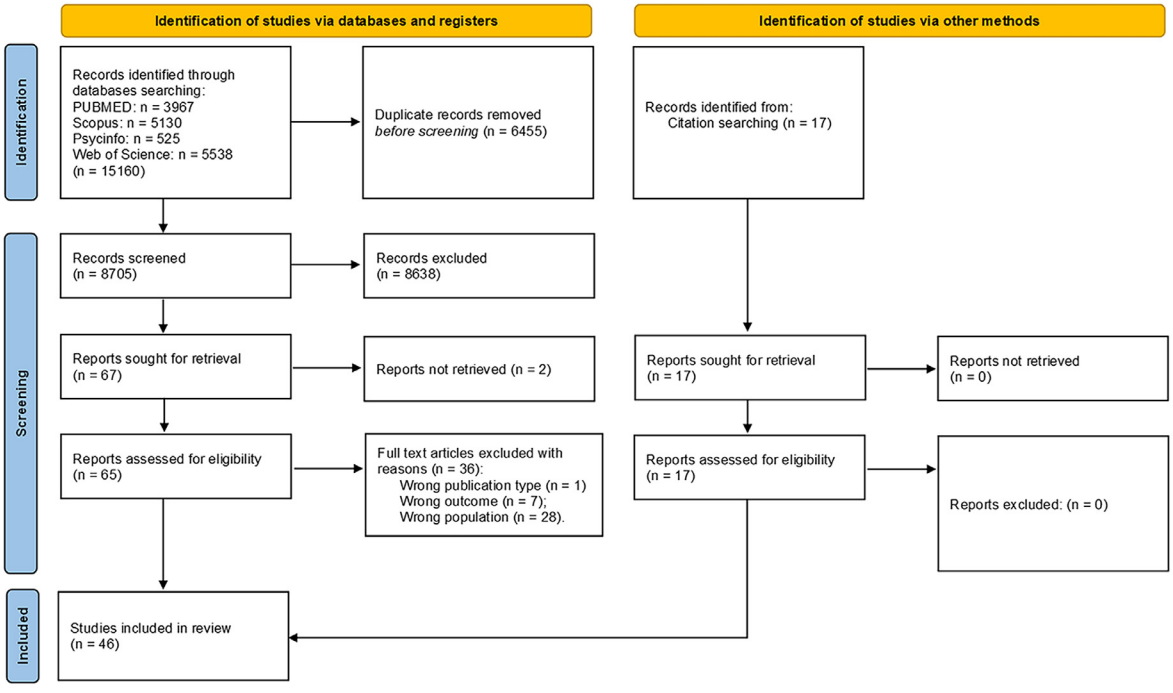


FIGURE 1 PRISMA flow diagram of searches of the records and the identification and selection of the studies (*Haddaway and McGuinness, 2022*).

TABLE 1 SYNTHESIS OF THE CHARACTERISTICS AND MAIN FINDINGS OF THE INCLUDED STUDIES

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
1	*Applegarth et al., 1995* (USA)	Quantitative, longitudinal follow-up study (T1: couples who achieved pregnancies through egg donation; T2: couples who returned the initial survey)	Questionnaires (specifically developed to seek information related to the couple's adjustment to parenting experience, i.e. impact on marital and family relationships)	49 OD heterosexual couples (T1); 30 couples (T2)	From 12 weeks to 7 years	Average length of marriage was 8.9 years with couples married between 2 and 20 years. Around two-fifths of couples reported that conception circumstances had affected their marriage, bringing them emotionally closer and fostering gratitude for the shared experience of pregnancy; 94% of wives and 90% of husbands agreed on the significant impact of parenthood on their marriage, some noting that their focus had shifted more towards their children, others that supporting each other through infertility challenges deepened their bond. Many also reported discovering new shared interests and activities post-birth, bringing renewed energy and excitement to their relationship
2	*Baiocco et al., 2018* (Italy)	Quantitative, cross-sectional study	Questionnaire (DAS)	125 lesbian mothers through SpD (47.2% were the genetic parent of the child); 70 gay fathers through surrogacy; 195 naturally conceiving different-sex parents	From 3 to 11 years (M = 4.33, SD = 1.83)	The number of couples who had been together for more than 10 years was almost the same as those who had longer relationships; the highest figure described partners who had been together for 6–10 years. Results on dyadic adjustment were more positive for same-sex parent families (gay and lesbian) than different-sex parent families. Lower parental self-agency, family functioning and dyadic adjustment were linked to more frequent problematic child behaviours; in contrast, higher levels of parental self-agency and dyadic adjustment significantly predict more frequent prosocial behaviours in children
3	*Bendvold et al., 1989* (Norway)	Quantitative, cross-sectional study	Hospital records	227 heterosexual women with children born via SpD	Mean age 3.6 years (range 1–14 years)	Indicates that, in Norway, couples with children conceived through SpD are not more at risk of break-ups than the naturally conceiving population
4	*Blake et al., 2012* (UK)	Mixed-methods, longitudinal study (T1: child's age 1 year; T2: child's age 2 years; T3: child's age 3 years; T4: child's age 7 years; T5: child's age 10 years)	Interview and questionnaire assessment of marital stability and quality. Questionnaires were given at every phase to both parents, while interviews were conducted only when children were aged 1, 7 and 10 years. The couples completed the GRIMS. A standardized interview assessing marital quality was also administered to mothers and fathers separately	When the children were 1 year old, 50 SpD families, 51 OD families, 42 surrogacy families and a comparison group of 80 natural conception families. By child's age 10 years, the study included 34 SpD families, 30 OD families, 33 surrogacy families and 55 NC families. All families were heterosexual two-parent families	Between 1 and 10 years	At the start of the study, all couples were married or cohabiting. By the time children reached age 10, 13% of couples had divorced or separated, with similar rates across family types. Marital stability did not differ between family types. Regarding marital quality, mothers in NC families reported higher marital satisfaction than those in AR families when the children were 2 years old. Mothers' marital quality was assessed when the children were 1, 7 and 10 years old, showing a significant difference at age 7, with mothers in surrogacy families reporting the lowest marital quality, while those in OD families reported the highest. No differences in marital satisfaction or quality were found among fathers across family types at any time point
5	*Borneskog et al., 2014a* (Sweden)	Quantitative, longitudinal study part of a longitudinal research project (phase 3 of the Swedish study of gamete donation)	Questionnaire (SPQS)	131 lesbian SpD parents; 83 heterosexual AUT-IVF parents; 118 NC heterosexual parents	12–36 months	No significant differences in relationship problems between partners were observed across family types or genders
6	*Borneskog et al., 2014b* (Sweden)	Quantitative, longitudinal follow-up study (Swedish Study on Gamete Donation) (T1: commencement of ART treatment; T2: 2 months after the treatment; T3: about 3 years after the treatment)	Questionnaire (ENRICH)	In the first phase of the study (T1), 166 lesbian SpD couples and 151 heterosexual AUT-IVF couples participated; in the last phase of the study (T3), there were 114 lesbian women (57 birth mothers and 57 partners, with 40 having had children) and 126 heterosexual men and women (63 men and 63 women)	Between 12 and 36 months old	Relationship satisfaction declined in both lesbian and heterosexual couples from T1 to T3. In comparing relationship quality levels before and 3 years after treatment, successful treatment (i.e. having children) was linked to lower satisfaction in communication for lesbian couples, with both treated women and their partners reporting less satisfaction if the treatment resulted in a child. Among women with successful treatments, lesbian women scored higher in conflict resolution and financial management than heterosexual women. Additionally, lesbian partners reported greater satisfaction with leisure activities compared with heterosexual men when treatment was successful
7	*Bos et al., 2004* (the Netherlands)	Quantitative, cross-sectional study	Questionnaire (PSI)	100 lesbian mothers' families, who conceived through SpD; 100 heterosexual families with NC children	Children's mean age in lesbian families was 5.8 years	No significant differences in couple relationship satisfaction between lesbian biological mothers and heterosexual mothers. However, lesbian biological mothers were more satisfied with their partners as co-parents compared with heterosexual mothers. Lesbian social mothers reported higher couple relationship satisfaction than heterosexual fathers, but there was no significant difference in co-parenting satisfaction between lesbian social mothers and heterosexual fathers. Among lesbian-mother families, there was no significant difference between biological and social mothers in terms of couple relationship satisfaction or satisfaction with their partner as a co-parent

(continued on next page)

TABLE 1 (*Continued*)

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
8	*Chan et al., 1998* (USA)	Quantitative, cross-sectional study	Questionnaire (Locke-Wallace Marital Adjustment Test)	55 lesbian mothers and 25 heterosexual families conceiving through SpD. Of these, 50 families were headed by couples, while 30 families were currently formed by single parents (families that were once headed by couples who had since separated). Measures of relationship quality were administered only to couple-headed families	Children's mean age was 7.5 years (SD = 1.8) in lesbian families and 7.8 years (SD = 1.9) in heterosexual families	In families headed by couples, children tended to show fewer externalizing and internalizing behaviour problems when their parents reported higher relationship satisfaction. Conversely, when parents reported higher levels of conflict, children were more likely to exhibit behavioural problems. Overall, better parental relationship quality was associated with better child adjustment
9	*Cook et al., 1995* (UK)	Quantitative, cross-sectional study (data were drawn from the European Study of Assisted Reproduction Families)	Interviews with parents and questionnaire (GRIMS)	45 heterosexual SpD families; 55 heterosexual adoptive families; 41 heterosexual AUT-IVF families	4–8 years	No significant differences were observed in relationship satisfaction scores between parents who disclosed and those who did not, for both mothers and fathers
10	*Daniels et al., 1995* (New Zealand)	Qualitative, cross-sectional study	Interviews with parents covering, among others, the area of the couple's relationship	58 heterosexual SpD couples	Not specified (children were conceived between 1983 and 1987, so were aged 8–12 years in the year of the study publication)	In 71% of couples, partners agreed on whether to disclose donor insemination to their child, while the remaining disagreed on this issue. Some were undecided or avoided the topic, while others faced disagreements resolved through compromise or deference. Men frequently opposed disclosure due to denial, stigma or fear of weakening their paternal bond, while women often deferred to protect their partners or maintain harmony This dynamic may stem from societal norms, the stigma of male infertility and the genetic asymmetry with the child. Women's greater involvement in ART treatment may also give them more time to process these issues, leaving men feeling marginalized. Additionally, secrecy can lead to tension, especially if one partner breaks the agreement
11	*Daniels et al., 1996* (New Zealand)	Quantitative, cross-sectional study	Questionnaires (specifically developed questions)	50 heterosexual SpD couples	1–6 years	The average length of marriage was 9.8 years; no difference regarding the duration of the marriage was detected between those couples who were still in a relationship and those who had separated/divorced. Both stable and divorced couples reported positive and increasingly better feelings towards the donation. Only male partners who had separated were clearly less happy before they had conceived
12	*Durna et al., 1995* (Australia)	Quantitative, cross-sectional study	Questionnaires (specifically developed questions)	60 heterosexual SpD couples	6 months to 17 years	The median marriage duration was 11.63 years, with low divorce and separation rates (1.8%). Nearly half (47%) of couples felt their marriage improved after having a child via donor insemination, 50% reported no change and only 3% felt it had deteriorated. No significant differences were found between men and women in these perceptions
13	*Freeman and Golombok, 2012* (UK)	Mixed-methods, cross-sectional design part of a longitudinal research project (phase 2 of *Lycett et al., 2004*, 2005, when the children were 4–8 years)	Interviews with parents and questionnaire (GRIMS)	30 heterosexual SpD families	10–14 years (mean age 12.53 years)	The divorce rate (23%) among parents was consistent with population norms for England and Wales. Disclosure decisions were not linked to differences in divorce rates or marital satisfaction. Only two divorces occurred after the families were first interviewed, neither being related to sperm donation issues. Among intact marriages, there were no differences in marital satisfaction between disclosure groups for either mothers or fathers
14	*Gartrell et al., 1999* (USA)	Qualitative, cross-sectional design part of a longitudinal research project (phase 2 of the National Lesbian Family Study)	Interviews exploring different areas of family functioning, including how having the child impacted the couple relationship	156 lesbian SpD mothers	2 years	Child-rearing was a significant stressor for more than half of the two-mother families in this sample. Among couples, 91% felt they had less time and energy for their relationship and 80% experienced extended sexual inactivity after childbirth. Eight couples divorced between the two interview periods, having been together an average of 6 years. While the break-ups were universally described as traumatic, no significant differences were identified between divorced and stable couples on measured variables

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TABLE 1 (*Continued*)

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
15	*Gartrell et al., 2000* (USA)	Qualitative, cross-sectional design part of a longitudinal research project (phase 3 of the National Lesbian Family Study)	Interviews exploring different areas of family functioning, including how having the child impacted the couple relationship	50 lesbian SpD mothers	5 years	Between the time the child was 2 and 5 years old, 65% of mothers sought counselling, primarily due to relationship conflicts (25%). By the time the child was 5, 31.5% of the original couples had separated, one co-mother had died, and one single mother had partnered with a step-mother. Among continuous couples, 37% of birth mothers and 29% of co-mothers felt their relationship had strengthened due to having a child. Jealousy or competitiveness in bonding with the child decreased. However, almost all the mothers reported that having children significantly reduced the time and energy for their relationship. Sexual frequency also declined
16	*Gartrell et al., 2006* (USA)	Qualitative, cross-sectional design part of a longitudinal research project (phase 4 of the National Lesbian Family Study)	Interviews exploring different areas of family functioning, including how having the child impacted the couple relationship	78 lesbian and single families (76 biological mothers and 61 social mothers) with children conceived through SpD	10 years	There was a significant increase in break-ups between T2 and T3, as well as T3 and T4. The issues that led to separation included incompatibility/growing apart in half of the couples, an affair in 26.7% and differences in parenting style in 20%. Unwillingness to share domestic, economic and child-rearing responsibilities contributed to relationship dissolution in some couples. Twenty-two separated couples said that having a child delayed the dissolution of their relationship. The mean relationship duration in separated lesbian couples was 9.9 years
17	*Gebhardt et al., 2017* (Sweden)	Quantitative, longitudinal study part of the prospective longitudinal Swedish Study on Gamete Donation (T1: treatment start; T2: 2 months later; T3: children's age 1–4 years old)	Questionnaires (ENRICH) and one study-specific item regarding the perceived couple agreement about disclosure to children	213 heterosexual parents who conceived their children through OD (n = 103) and SpD (n = 110)	1–4 years	Perceived agreement on disclosure did not significantly predict parenting stress levels. Instead, the only significant predictor of parenting stress was relationship satisfaction, as lower scores on this variable were associated with higher general parenting stress. An interaction term was introduced to examine the effect of the lack or the presence of a genetic link (sex and type of donation) on parenting stress, but it was not significant
18	*Gillet et al., 1996* (New Zealand)	Quantitative, cross-sectional study	Questionnaires (specifically developed questions and the Locke–Wallace Marital Adjustment Test)	50 heterosexual SpD couples	Children were born between 1984 and 1989, resulting in an age range of 7–12 years	Partners generally agreed on marital interaction scores. In response to whether they would marry the same person again, five women said no when their husbands said yes. While a small percentage of participants felt infertility had negatively impacted their relationship, nearly all of these men felt that having a child through donor insemination had resurrected their relationship
19	*Golombok et al., 1995* (UK)	Quantitative, cross-sectional study (first phase of a prospective longitudinal study)	Questionnaires (GRIMS)	41 heterosexual AUT-IVF families; 45 heterosexual SpD families; 55 heterosexual adoptive families; 43 heterosexual NC families	4–8 years	Almost all of the parents were married (4 couples with a NC child were cohabiting). Only 2 sets of parents in the AUT-IVF, SpD and NC groups, and 1 set of adoptive parents, had separated. Analysis of GRIMS scores showed significant differences in marital relationship quality, with both mothers and fathers reporting more marital difficulties among couples with NC children compared with other groups
20	*Golombok et al., 1996* (UK, the Netherlands, Italy, Spain)	Mixed-methods, cross-sectional design part of a longitudinal research project (phase 1 of the European Study of Assisted Reproduction Families)	Interviews and questionnaires (GRIMS)	116 heterosexual AUT-IVF families; 111 heterosexual SpD families; 115 heterosexual adoptive families; 120 heterosexual NC families	4–8 years	Nearly all parents in the study were married, with only 3.3% separated or divorced, including 7 IVF, 2 SD, 1 adoptive and 5 NC couples. Among those who remained together, significant differences in marital relationship quality were found for mothers, with adoptive mothers reporting fewer marital difficulties. No such differences were observed for fathers, and there were no significant group-by-country interactions in GRIMS scores
21	*Golombok et al., 1999* (UK)	Mixed-methods, cross-sectional study from a longitudinal research project (phase 1 of *Murray et al., 2006*)	Interviews and questionnaires (GRIMS)	41 heterosexual AUT-IVF families; 45 heterosexual SpD families; 21 heterosexual OD families; 55 heterosexual adoptive families	4–8 years	Most parents were married, with only 3.8% separated or divorced, including 2 IVF, 2 SpD, 1 adoptive and 1 OD couple. Among couples who stayed together, mothers of genetically unrelated children reported significantly higher marital satisfaction than mothers of genetically related children. No significant differences in marital satisfaction were found for fathers
22	*Golombok et al., 2002a* (UK, the Netherlands, Italy, Spain)	Mixed-methods, cross-sectional design part of a longitudinal research project (phase 2 of the European Study of Assisted Reproduction Families)	Interviews and questionnaires (GRIMS)	102 heterosexual AUT-IVF families; 94 heterosexual SpD families; 102 heterosexual adoptive families; 102 heterosexual NC families	Children from the UK were the oldest (mean age 11.9 years), while those from the Netherlands were the youngest (mean age 11.1 years)	The study found no differences in marital satisfaction among mothers and fathers, with 90% of AR parents still married during their child's transition to adolescence. AR parents showed no increased levels of emotional or marital problems or conflict

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TABLE 1 (*Continued*)

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
23	*Golombok et al., 2004* (UK)	Mixed-methods, cross-sectional design part of a longitudinal research project (first phase of the UK Longitudinal Study of Reproductive Donation Families)	Interviews and questionnaires (GRIMS)	51 heterosexual OD families; 50 heterosexual SpD families; 80 heterosexual NC families	9–12 months	No significant differences in marital quality were found between family types for measures such as mutual enjoyment, arguments, partner support in childcare or marital satisfaction. However, a significant difference was found in confiding, with gamete donation fathers confiding less than NC fathers and SpD fathers confiding less than OD fathers
24	*Golombok et al., 2005* (UK)	Mixed-methods, cross-sectional design part of a longitudinal research project (second phase of the UK Longitudinal Study of Reproductive Donation Families)	Interviews and questionnaires (GRIMS)	48 heterosexual OD families; 46 heterosexual SpD families; 68 heterosexual NC families	2 years	In this study, gamete donation mothers perceived their children as more vulnerable than NC mothers did. However, no significant differences were found for marriage-related variables (relationship quality, confiding, arguments). For fathers, no significant results were found in the analyses for psychological state measures, including GRIMS, or for marriage-related variables (relationship quality, confiding, arguments)
25	*Golombok et al., 2006* (UK)	Mixed-methods, cross-sectional design part of a longitudinal research project (third phase of the UK Longitudinal Study of Reproductive Donation Families)	Interviews and questionnaires (GRIMS)	34 surrogacy families; 41 heterosexual OD families; 41 heterosexual SpD families; 67 heterosexual NC families	3 years	The analyses of mothers' and fathers' scores on GRIMS showed no significant results for different family type groups
26	*Golombok et al., 2002b* (UK)	Mixed-methods, cross-sectional follow-up study (second phase of *Golombok et al., 1995*, when the children were 4–8 years old)	Interviews and questionnaires (GRIMS)	37 heterosexual SpD families; 49 heterosexual adoptive families; 91 heterosexual NC families	12 years	The majority of parents (89%) were married or cohabiting during the study, while 9% had separated or divorced since the child's birth. Two SpD fathers and one adoptive father had passed away. There were no significant differences between family types in marital status or marital satisfaction, for either mothers or fathers
27	*Golombok et al., 2013* (UK)	Mixed-methods, longitudinal study (phases 3, 4 and 5)	Interviews and questionnaires (GRIMS)	30 surrogacy families; 31 heterosexual OD families; 35 heterosexual SD families; 55 heterosexual NC families	At phase 3, children's age was 3 years. At phase 4, children's age was 7 years. At phase 5, children's age was 10 years	The study found that mothers with greater marital problems were more likely to have missing data. Anxiety, depression and marital quality were combined into a latent variable called maternal distress. Parenting quality (including maternal distress) did not differ between family types. However, non-disclosing mothers reported significantly higher levels of maternal distress compared with disclosing mothers
28	*Imrie et al., 2019* (UK)	Quantitative, cross-sectional study (part of a longitudinal study examining family functioning in families created following fertility treatments)	Interviews and questionnaires (GRIMS)	57 OD families and a comparison group of 56 AUT-IVF families. All families were heterosexual two-parent families	6–18 months (M = 11.19 months; SD = 2.25)	In OD families, couple relationships had a mean duration of 12.45 years. There were no significant differences in relationship satisfaction between mothers or fathers based on OD versus IVF. Among mothers, 70% in the OD and 80% in the IVF group reported above-average relationship quality, while 11% of OD and 4% of IVF mothers indicated severe relationship issues. For fathers, 80% in the OD and 84% in the IVF group reported above-average satisfaction, with only 2% and 5%, respectively, indicating severe problems
29	*Jadva et al., 2022* (UK)	Mixed-methods, cross-sectional study (second phase of *Imrie et al., 2019*)	Interviews and questionnaires (GRIMS)	72 heterosexual-couple families with infants born through OD	Mean age 67.3 months (range 61–82 months)	34.4% of mothers reported below-average relationship satisfaction, with 8.2% experiencing severe problems and 4.9% reporting very severe issues. Among fathers, 10% reported average satisfaction, while 20% reported below average satisfaction. Relationship satisfaction was notably lower for parents over 45 compared with those aged 35 and under and those aged 41–44
30	*Klock & Maier, 1991* (USA)	Quantitative, cross-sectional study	Questionnaire (DAS)	34 heterosexual couples and 2 individuals who conceived using SD	0–7 years	The mean duration of marriage was 8.2 years. 13% of participants showed below-average marital adjustment. No significant correlation was found between marital adjustment scores and various factors, including time to initiation of ART with SpD, age, marriage duration, number of children, husband's presence during insemination or disclosure of ART with SpD or counselling

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TABLE 1 (*Continued*)

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
31	*Kovacs et al., 2013* (Australia)	Quantitative, cross-sectional study (part of the Australian Institute of Family Studies Children and Family Life study	Questionnaires on parenting alliance (using a short version of the Parenting Alliance Inventory to measure each parent's working relationship with their child's other parent) and relationship satisfaction (using the Relationship Assessment Scale)	Initial telephone contact with 111 SpD families. Of these, 79 SD families participated in the research and were compared with 987 couple families, 364 single-mother families and 112 step-father families	In SD families, children had a mean age of 10.9 years (SD = 2.2)	Of the 111 SpD couples who provided information to the study, 96 had remained intact, 10 were separated and 5 women were widowed. When comparing SpD families with couple and step-father families, and accounting for maternal age and family type, only small differences were found between SpD and couple families across age groups. However, step-father families showed lower levels of alliance compared with SpD families. Relationship satisfaction levels were similar across all family types
32	*Kovacs et al., 2015* (Australia)	Quantitative, cross-sectional study (Follow-Up of Children Conceived through Donor Insemination study nested within the larger Australian Institute of Family Studies Children and Family Life study)	Questionnaires (Relationship Satisfaction Scale to assess relationship satisfaction)	62 mothers from SpD families; of these, 60 mothers were the child's primary carers	Children's mean age 10.9 years (SD = 2.2)	Parents who disclosed SpD information to their children had been in their relationships slightly longer on average (20 years) than those who had not disclosed (19.3 years), but this difference was not significant. Relationship satisfaction, however, showed a moderate effect size (d = 0.50), with couples who informed their children about the donation scoring slightly higher (4.49) on the Relationship Assessment Scale than those who had not disclosed (4.01). Overall, both groups reported high relationship satisfaction, indicating that while disclosure is associated with slightly higher satisfaction, the difference has limited practical significance
33	*Lalos et al., 2007* (Sweden)	Qualitative, cross-sectional follow-up of the Swedish study (see Gottlieb et al., 2000)	Semi-structured in-depth interviews were developed to understand the process and the meanings associated with telling and sharing information about the donor. In particular, one question explored the impact (if any) of disclosure on the partner relationship	19 heterosexual SpD families	Children's mean age 7 years (range 1–15 years)	Most participants viewed their marital relationship as satisfactory and functional. Almost half of women and men described it as very good and harmonious, while the other halves rated it as acceptable or rather good. Two women described their relationship as quite poor. One couple had recently separated due to the woman beginning a new relationship, and there was one additional divorce in the sample. Telling their child about the SpD generally had a positive impact on the couple's relationship. Most participants (91%) reported feelings of relief and pride, particularly due to their honesty with their child. Only one couple had not shared the information mutually, as the husband was unaware his wife had already told their son
34	*Leiblum and Aviv, 1997* (USA)	Quantitative, cross-sectional study	Questionnaire (Donor Insemination Questionnaire, specifically developed and piloted by the authors to assess different areas concerning the donor insemination experience)	27 heterosexual couples and 7 women (whose husbands did not return the questionnaires) who conceived through SpD	Children's age range between 1 and 13 years	The couples in this study generally had stable marriages, with only 2 out of 27 experiencing a change in marital status after the donation (one due to widowhood). Divorce rates among these couples were lower than in the general population. Some parents expressed concerns about potential stigma and emotional effects perceived by their partners related to disclosing donor conception to their children. Specifically, 15% of fathers and 19% of mothers felt it could stigmatize the mother, while 15% of mothers and 4% of fathers felt it could stigmatize the father. Additionally, 15% of mothers and 7% of fathers believed that withholding this information might preserve the mother's self-esteem, and 11% of mothers and 4% of fathers worried that disclosure could affect the father's attachment to the child
35	*Lycett et al., 2004* (UK)	Mixed-methods, cross-sectional study part of a longitudinal research project (phase 1 of *Freeman and Golombok, 2012*)	Interviews with parents, adapted from the procedure developed by Quinton and Rutter to assess family functioning, evaluating different areas including the quality of the couple relationship	46 heterosexual SpD families	4–8 years	At the time of the study, 15% of couples had separated or divorced, with no difference in rates between those who disclosed and those who did not. Among couples who remained together, no significant differences were found in marital functioning measures such as mutual enjoyment, confiding, frequency of arguments or overall relationship quality. Most couples reported high relationship satisfaction: 63% experienced a high level of enjoyment in shared activities, 65% confided in each other about important matters, 75% had fewer than four arguments per year, and 95% rated their relationship as 'good' or 'excellent'.
36	*Lysons et al., 2023* (UK)	Mixed-methods, longitudinal study (T1: children between 3 and 12 months; T2: child 5 years old)	Semi-structured interviews; if data regarding disclosure were available for both members of the couple (n = 48), the level of agreement on disclosure between mothers and fathers was calculated	73 heterosexual OD couples	Between 3 months and 5 years	77.1% of the couples agreed on their disclosure strategy at phase 2, while 22.9% showed mismatched intentions. The most common mismatch involved mothers who had begun disclosing while fathers had plans to disclose but had not yet done so. In three cases, the mothers planned to tell while the fathers had already started. In two couples mothers were uncertain about telling, with fathers intending not to disclose. In one couple, the mother planned to disclose while the father did not, and in another, the opposite was true

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TABLE 1 (*Continued*)

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
37	*Murray et al., 2006* (UK)	Mixed-methods, cross-sectional design part of a longitudinal research project (phase 2 of *Golombok et al., 1999*, when the children were 4–8 years old)	Interviews and questionnaires (GRIMS)	34 heterosexual AUT-IVF families; 35 heterosexual SpD families; 17 heterosexual OD families	12 years	At the time of the study, most parents were married or cohabiting, while 8 couples had divorced or separated since the child's birth, and 2 SpD fathers had died. No significant differences were found between family types in marital status or marital satisfaction
38	*Nachtigall et al., 1997* (USA)	Quantitative, cross-sectional study	Questionnaires (DAS and the Miller Social Intimacy Scale to evaluate the intimacy currently experienced with the partner)	94 women and 82 men from heterosexual SpD couples	Mean age of oldest child 5.3 years (SD = 3.2)	The couples' relationship was, on average, 11.1 years long. Stigma was not linked to marital satisfaction or intimacy. Disclosure of donor conception, whether to others or to the child, was unrelated to marital satisfaction and intimacy
39	*Owen and Golombok, 2009* (UK)	Mixed-methods, cross-sectional design part of a longitudinal research project (phase 3 of *Golombok et al., 1995*, when the children were 4–8 years old)	Interviews and questionnaires (GRIMS)	26 heterosexual AUT-IVF families 26; heterosexual SpD families; 38 heterosexual adoptive families; 63 heterosexual NC families	18 years (adolescents conceived through SD had a mean age of 17 years and 4 months)	For mothers, no differences were found between family types for depression or marital satisfaction. For fathers, there were no differences between family types in marital satisfaction
40	*Rodino and Sanders, 2023* (Australia)	Quantitative, cross-sectional study	Questionnaires (ECR-RS, QRI, MSPSS)	This study involved 301 participants (209 female recipients and 92 donors). Of the recipients, two-thirds were committed to a heterosexual relationship, while the others were committed to a same-sex relationship, with 58.4% married and 3.8% dating participants; 104 had successfully conceived children via donated gametes (68 SpD, 23 OD, 6 ED and 7 double-gamete donation)	The majority of donor-conceived children were aged less than 10 years (median 3 years)	Recipients (n = 209) had significantly lower anxiety and avoidance attachment scores than the reference female community group. Single recipients showed higher avoidance scores than married ones, although anxiety scores did not differ significantly. For partnered recipients, greater disclosure about donor-assisted conception correlated with lower avoidance, but not anxiety. Child presence did not change the relation between attachment scores and the extent of disclosure for partnered women. Recipients reported high partner support levels. Higher perceived support was generally associated with lower avoidance and anxiety scores, except for QRI support in partnered recipients
41	*Shaw et al., 2022* (UK)	Qualitative, cross-sectional study	Semi-structured interviews	28 parents from 14 two-mother families who conceived via reciprocal IVF with SpD	Children were aged between 6 and 33 months (M = 20.50, SD = 8.77)	All families were still cohabiting. The first theme highlighted that reciprocal IVF allows both mothers to be equally involved in creating their child, fostering a sense of unity, equality and meaning in their relationship. However, after the children were born, maintaining equality in parenting proved to be challenging, although the significance of becoming mothers together remained important. Many found it deeply meaningful (a 'magical' experience) to create a child who felt part of them both. This solution also provided a sense of parity with heterosexual couples. On the contrary, genetic mothers often choose it to avoid feeling jealous of their partner's relationship with the child. However, some genetic mothers experienced challenges after birth, as the gestational bond provided the carrying mother with more opportunities for connection with the baby
42	*Shehab et al., 2008* (USA)	Qualitative, cross-sectional study	Semi-structured interviews	62 heterosexual SpD couples; 79 heterosexual OD couples	For ED families, the average age of the oldest donor-conceived child was 3.5 years, whereas for SpD families it was 7.2 years	Couple dynamics were similar regardless of using donor sperm or eggs, with most participants married (95% in OD and 92% in SpD groups). Couples approached disclosure decisions differently; about half reported no disagreement, deciding intuitively or after discussing information. When initial attitudes differed, discussions were more complex, often leading to one partner deferring based on emotional expertise, anticipated impact or persuasive arguments. Men frequently deferred to women, while women deferred in non-disclosure cases, often to protect the non-biological parent–child relationship. Undecided couples tended to avoid the issue, but most resolved disagreements through deferral, prior agreements or negotiation

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TABLE 1 (*Continued*)

ID	Authors and country	Study design	Tools to assess relationship quality	Sample	Child's age	Main results
43	*Sydsjö et al., 2014a* (Sweden)	Quantitative, follow-up study part of the prospective longitudinal Swedish Study on Gamete Donation (T1: during the treatment; T2: 2–5 years after the first assessment)	Questionnaire (ENRICH)	At T1 of the study, 120 heterosexual OD couples and 119 heterosexual couples using AUT-IVF participated in the study; 52 OD couples participated in both phases of the study – of these, 50 OD couples had children born after treatments; 61 AUT-IVF couples participated in both phases of the study	2–5 years	Women who conceived and had a child through OD rated their relationship quality as higher than women who conceived with their gametes. Among couples with children, those who used OD reported a better relationship quality than the control group
44	*Sydsjö et al., 2014b* (Sweden)	Quantitative, follow-up study part of the prospective longitudinal Swedish Study on Gamete Donation (T1: during the treatment; T2: 2–5 years after the first assessment)	Questionnaire (ENRICH)	At T1 of the study, 245 individuals in SpD couples and 119 heterosexual couples using AUT-IVF participated in the study; 49 SD couples participated in both phases of the study, and of these, 47 individuals in SpD couples had children born after treatments; 61 couples who used AUT-IVF participated in both phases of the study	2–5 years	Minimal differences were observed between individuals with and without children in both sperm-recipient and traditional IVF groups. The only noted difference appeared in the second ENRICH inventory assessment among the traditional IVF group. Overall, no significant differences in total ENRICH scores were found between the two groups at either assessment
45	*Van Rijn-van Gelderen et al., 2018* (UK, the Netherlands, France)	Quantitative, cross-sectional study	Questionnaire (GRIMS)	38 gay-father families through surrogacy; 61 lesbian-mother families through SpD; 41 heterosexual-parent families through AUT-IVF	In lesbian-mother families, children had a mean age of 3.6 years (SD = 0.50)	After accounting for the caregiver role (primary or secondary, based on the involvement with the child on a day-to-day basis), no significant differences were found in relationship satisfaction across different family types. Similarly, when controlling for family type, there were no significant differences between primary and secondary caregivers in relationship satisfaction
46	*Widbom et al., 2022* (Sweden)	Quantitative, cross-sectional study (part of the prospective longitudinal Swedish Study on Gamete Donation)	Questionnaire (ENRICH)	83 heterosexual OD parents; 113 heterosexual SpD parents	7–8 years old	There were no significant differences in psychological adjustment or relationship quality levels based on whether parents disclosed the donor conception or kept it undisclosed. Disclosure status and type of donation also showed no interaction effects on the quality of the couple's relationships

Conception methods: AUT-IVF, autologous IVF; ED, embryo donation; OD, oocyte donation; NC, naturally conceived; SpD, sperm donation.

Tools: DAS, Dyadic Adjustment Scale (to assess participants' dyadic adjustment); ECR-RS, Experiences in Close Relationships – Relationships Structure Questionnaire (to assess adult attachment patterns); ENRICH, Evaluating and Nurturing Relationship Issues, Communication and Happiness (to assess perceptions of partner relationship); GRIMS, Golombok Rust Inventory on Marital Satisfaction (to evaluate relationship quality for married or cohabiting couples); MSPSS, Multidimensional Scale of Perceived Social Support (to assess perceptions about support from family, friends and significant others); PSI, Parenting Stress Index (with the Marital Satisfaction Scale providing a global assessment of couple relationship satisfaction; a subscale of Parental Stress Index was used to measure the degree of satisfaction with the partner as a co-parent); QRI, Quality of Relationship Inventory (to assess support experienced in the current relationship with a romantic partner); SPSQ, Swedish Parenthood Stress Questionnaire (to assess different areas contributing to parenting stress, including spouse relationship problems).

ART, assisted reproductive technology; M, Mean.

instrument employed), child's age, conception method and study outcomes.

A thematic narrative synthesis was employed to analyse and integrate the findings from the included studies. This approach was selected due to the substantial heterogeneity in study design, populations and methodological approaches. Following previous literature (*Lucas et al., 2007*; *Popay et al., 2006*; *Rodgers et al., 2009*), thematic narrative synthesis is well suited to reviews that aim to synthesize diverse forms of evidence. In this review, key constructs emerging across studies were identified and grouped into overarching thematic categories. Specifically, constructs were identified using an inductive coding process and independently generated by two authors through repeated reading of the studies. They were then refined into broader themes through discussion. The study findings were then narratively summarized and synthesized within and across these themes to construct an integrated and conceptually coherent account of the evidence base.

RESULTS

Study characteristics

Study setting

The main characteristics and information of the studies included in the review are reported in TABLE 1. Concerning the countries where the studies were carried out, 17 papers involved a sample from the UK, 9 from the USA, 7 from Sweden, 4 from Australia, 3 from New Zealand, 1 from Norway, 1 from Italy, and 1 from the Netherlands. In addition, three multicentre studies, developed in European countries (consisting of two studies involving participants from the UK, the Netherlands, Italy and Spain, and one study with families from the UK, the Netherlands and France) were included in the present review.

Study design

TABLE 2 summarizes the study designs of the included research. Thirty-seven studies implemented a cross-sectional design, 22 of which were part of longitudinal projects. Longitudinal studies were implemented within the Swedish Study on Gamete Donation Program (*Borneskog et al., 2014a*, *2014b*; *Gebhardt et al., 2017*; *Sydsjö et al., 2014a*, *2014b*) and in four additional studies (*Applegarth et al., 1995*; *Blake et al., 2012*; *Golombok et al., 2013*; *Lysons et al., 2023*), contributing to a total of nine included in the present review. As for the research methodology, more than half (n = 24) of the included studies implemented a quantitative design; 7 articles out of the total were based on qualitative studies, and 15 papers employed a mixed-methods design (both quantitative and qualitative analyses).

Sample composition: conception method, sexual orientation, children's age and donor information

The majority of the available research focused on families with children conceived using donor spermatozoa (n = 41), more than double the number of those examining families formed via egg donation (n = 16). Finally, *Rodino and Sanders (2023)* included a group of participants who used embryo donation to conceive (n = 1).

In several studies, comparisons with control groups were made (n = 21). These groups were variously composed and combined depending on the research aims and most frequently included families formed through ART with the partners' own gametes (n = 13) and/or natural conception (n = 13). Less commonly, adoptive families were included in 7 articles, of which 3 were based on data from the European Study of Assisted Reproduction Families (*Golombok et al 1995*, *2002b*; *Owen and Golombok, 2009*); five studies examined the functioning of couples who pursued surrogacy, comparing them with donor-conceived families in which the pregnancy was carried out within the gamete-recipient couple (*Baiocco et al., 2018*; *Blake et al., 2012*; *Golombok et al., 2006*, *2013*; *van Rijn-van Gelderen et al., 2017*).

Most research has focused on heterosexual gamete-recipient couples, with 35 studies including samples primarily

TABLE 2 STUDY DESIGNS OF THE ARTICLES INCLUDED IN THE REVIEW

Study design	Number of studies	Reference for longitudinal research projects
Cross-sectional	37	
Cross-sectional studies part of longitudinal research projects	22	1. European Study of Assisted Reproduction Families (*Cook et al., 1995*; *Golombok et al., 1996*, *2002a*) 2. Prospective longitudinal project focusing on families created through sperm donation (*Golombok et al., 1995*, *2002b*; *Owen and Golombok, 2009*) 3. Prospective longitudinal project including data on oocyte and sperm donation families (*Golombok et al., 1999*; *Murray et al., 2006*) 4. The UK Longitudinal Study of Reproductive Donation Families (*Golombok et al., 2004*, *2005*, *2006*) 5. Longitudinal research project examining family functioning in families created following fertility treatments (*Imrie et al., 2019*; *Jadva et al., 2022*) 6. A longitudinal research project described by *Lycett and collaborators (2004)*, and by *Freeman and Golombok (2012)* 7. The Australian Institute of Family Studies Children and Family Life (CFL) study (*Kovacs et al., 2013*, *2015*) 8. The National Lesbian Family Study (*Gartrell et al., 1999*, *2000*, *2006*) 9. The Swedish Study on Gamete Donation Families (*Lalos et al., 2007*; *Widbom et al., 2022*)
Longitudinal	9	1. The Swedish Study on Gamete Donation Families (*Borneskog et al., 2014a*, *2014b*; *Gebhardt et al., 2017*; *Sydsjö et al., 2014a*, *2014b*) 2. *Applegarth et al. (1995)* 3. *Blake et al. (2012)* 4. *Golombok et al. (2013)* 5. *Lysons et al. (2023)*
Quantitative design	24	
Qualitative design	7	
Mixed-methods design	15	

composed of different-sex parents. Only four studies have specifically examined families with lesbian mothers, all conducted as part of the National Longitudinal Lesbian Family Study (NLFS) (*Gartrell et al., 1999*, *2000*, *2006*), except for one study conducted by Shaw and colleagues (*Shaw et al., 2022*). Other studies have compared lesbian-parent families and different-sex parent families (*Baiocco et al., 2018*; *Borneskog et al., 2014a*, *2014b*; *Bos et al., 2004*; *Chan et al., 1998*). In contrast, one study by *Rodino and Sanders (2023)* included a mixed sample but did not compare participants' characteristics based on their sexual orientation.

The families involved in the included studies can also be described based on the life cycle stage of the children conceived via gamete donation. The age ranges considered in the studies, as shown in **TABLE 1**, were heterogeneous and varied from a minimum of 12 weeks to a maximum of 18 years. It is of note that most studies focused on children under 10 years of age ($n = 39$).

Finally, another aspect used to classify the studies included in the review concerns the type of gamete donation based on the identifiability or anonymity of the donor. Not all articles reported this information ($n = 14$). Among the remaining papers, samples of children born respectively from anonymous donors ($n = 13$) and identity-release donation ($n = 9$) were included. Mixed samples with more than one donation method were considered in some studies as well ($n = 10$), and in six studies the recipients used known donors (*Applegarth et al., 1995*; *Golombok et al., 2004*, *2005*, *2006*, *2013*; *Rodino and Sanders, 2023*).

Main findings

TABLE 1 presents a summary of the findings extracted from the studies included in the review. The analysis of the included studies revealed four key areas of interest, which are outlined in a thematic narrative report below. These areas differ based on the psychological constructs related to the interpersonal dynamics observed in gamete-recipient couples. The main areas are: (i) the couple's relationship quality dimensions (comprising overall relational functioning, satisfaction, dyadic adjustment and attachment processes) in gamete-recipient couples, as well as in comparison with other family forms; (ii) relationship stability and duration; (iii) sexuality and intimacy within the couple; and (iv) partners' agreement and couples' decision-making processes, particularly regarding disclosure of donor conception.

Couple's relationship quality

The results concerning the couple's relationship quality — including relational constructs related to satisfaction, dyadic adjustment and adult attachment — have been analysed to identify key points of interest and potential salient life trajectories in donor-conceived families. Overall, the results of the included studies suggest general relationship satisfaction and adequate psychological functioning in gamete-recipient couples, although with some heterogeneity.

As for couples' relationship satisfaction and quality in donor-conceived families, 20 of the included studies suggest generally high levels of relationship satisfaction and no significant differences between families with children conceived through ART and those with children conceived naturally. Specifically, no significant differences were found in relationship satisfaction among heterosexual couples with children conceived via ART with the partners' own gametes, sperm donation or natural conception, or adopted (*Cook et al., 1995*; *Freeman and Golombok, 2012*; *Golombok et al., 2002a*, *2002b*, *2004*; *Lycett et al., 2004*; *Murray et al., 2006*; *Owen and Golombok, 2009*). However, Blake and colleagues observed that mothers in natural conception families reported higher relationship satisfaction levels than those in ART families when the children were 2 years old (*Blake et al., 2012*).

By contrast, other studies have found greater difficulties among naturally conceiving parents compared with ART, donor or adoptive parents (*Golombok, 1995*), and higher relationship quality in families formed through oocyte donation than autologous ART families (*Sydsjö et al., 2014a*). Imrie and co-workers found no significant differences in relationship satisfaction between oocyte donation and non-donor ART families, with many participants from oocyte donation families reporting above-average relationship quality (*Imrie et al., 2019*).

In contrast, two studies (*Borneskog et al., 2014b*; *Jadva et al., 2022*) found below-average relationship satisfaction levels and a decline in relationship satisfaction over time for both lesbian and heterosexual couples following successful sperm donation ART treatments, with some domains of relationship functioning appearing more affected for lesbian couples (for example, communication), while in other areas (which included conflict resolution, financial management and leisure satisfaction) lesbian women reported more favourable outcomes than heterosexual women or men. However, this finding should be interpreted in the light of the broader research showing that relationship satisfaction often decreases after the transition to parenthood, especially following the birth of a first child — a pattern observed across various family forms (for a summary, see *Bogdan et al., 2022*).

Additionally, *Jadva and colleagues (2022)* highlighted that older parents (aged 45 years and above) reported lower satisfaction in heterosexual oocyte donation families, and almost half of the mothers in their sample reported below-average relationship satisfaction. Among fathers, about 30% reported average or below-average satisfaction. Another study found no differences in relationship satisfaction levels between gay-father families through surrogacy, lesbian-mother families via sperm donation, and heterosexual-parent families by ART with their own gametes (*Van Rijn-van Gelderen et al., 2018*).

When examining family composition, *Bos and collaborators (2004)* reported that lesbian sperm-recipient biological mothers were more satisfied with their partners as co-parents than heterosexual mothers with naturally conceived children, and lesbian social mothers also reported higher relationship satisfaction than heterosexual fathers (*Bos et al., 2004*). Golombok and colleagues found that the mothers of genetically unrelated children (from sperm donation or adoption) had higher relationship satisfaction than the mothers of genetically related children (through non-donor ART), while no differences were found for fathers (*Golombok et al., 1999*).

Considering the relation between relationship satisfaction and other psychological variables, such as parenting stress and behavioural outcomes in donor-conceived children, Chan and co-workers found that higher relationship satisfaction in the parents was associated with fewer behavioural problems in the children, with both genetic and non-genetic parents reporting that greater relationship satisfaction and less conflict contributed to

better child adjustment (*Chan et al., 1998*). Similarly, Gebhardt and collaborators reported that high relationship satisfaction in sperm- and egg-donation families was associated with lower parenting stress (*Gebhardt et al., 2017*).

Fewer studies explicitly examined dyadic adjustment (*Baiocco et al., 2018*; *Klock and Maier, 1991*; *Nachtigall et al., 1997*). *Klock and Maier (1991)* found adequate dyadic adjustment in heterosexual couples using sperm donation, with only 13% of the sample below the Dyadic Adjustment Scale cut-off for clinical concern. Similarly, Nachtigall and colleagues reported that dyadic adjustment was not linked to perceived stigma for heterosexual couples with preschool- and school-aged children (*Nachtigall et al., 1997*). More recently, Baiocco and co-workers found that same-sex couples exhibited better dyadic adjustment than heterosexual couples, with gay men showing greater flexibility and cohesion than other sexual orientations (*Baiocco et al., 2018*).

Finally, *Rodino and Sanders (2023)* explored the role of attachment style and security in donor-conceived families, noting that both single and partnered gamete-recipient individuals showed lower levels of anxiety and avoidance than the community reference group. Moreover, those with the perception of higher partner support reported lower levels of attachment anxiety and avoidance.

Relationship stability and duration

Relationship duration was reported in nine of the included studies, most of which focused on sperm donation families (*Baiocco et al., 2018*; *Daniels et al., 1996*; *Durna et al., 1995*; *Gartrell et al., 2006*; Klock and Mayer, 1991; *Kovacs et al., 2015*; *Nachtigall et al., 1997*), while only two papers addressed couples who used donated eggs (*Applegarth et al., 1995*; *Imrie et al., 2019*).

Overall, both heterosexual couples (*Daniels et al., 1995*; *Durna et al., 1995*; Klock and Mayer, 1991; *Nachtigall et al., 1997*) and same-sex couples (*Baiocco et al., 2018*; *Gartrell et al., 2006*) with children born through sperm donation seem to have mid- and long-lasting relationships, with the average length of the relationships ranging from 8 to 12 years. Similar results have been reported in the studies including egg donation couples (*Applegarth et al., 1995*; *Imrie et al., 2019*), indicating that, at the time of their participation in the study, these couples were in stable relationships.

Differences in relationship duration have been investigated by some authors in relation to other interpersonal dynamics occurring in donor-conceived families. Specifically, Kovacs and colleagues found that couples who disclosed donor information to their children had been together longer than those who did not disclose, although not significantly so (*Kovacs et al., 2015*). It is possible that how this topic is dealt with might not be strongly associated with marital stability. Lycett and collaborators also found no significant differences in separation rates related to decisions on the disclosure of the donor conception (*Lycett et al., 2004*).

Sixteen studies provided insights on relationship stability, revealing that, at the moment of the study, nearly all gamete-recipient partners were still together with the person with whom they sought the treatment (*Golombok et al., 2002a*, *2002b*; *Kovacs et al., 2013*; *Leiblum and Aviv, 1997*; *Murray et al., 2006*; *Shaw et al., 2022*). Reported separation and divorce rates varied greatly across studies, ranging from very low levels (for instance no reported separations in *Shaw et al., 2022*) to a maximum of 23% (*Freeman and Golombok, 2012*). However, the latter data are similar to those registered for the general population in the UK (*Freeman and Golombok, 2012*) and in Norway (*Bendvold et al., 1989*); in only one study, the figures for donor-conceived couples' were lower than those for naturally conceiving families (*Leiblum and Aviv, 1997*).

As for donation type, most of the studies focused on sperm donation, while four examined the case of donated oocytes (*Blake et al., 2012*; *Golombok et al., 1999*; *Murray et al., 2006*; *Shehab et al., 2008*). High percentages of couples were still married or cohabitating years after the first child was born — around 90% for both egg and sperm donation families (*Shehab et al., 2008*). In addition, gamete-recipient couples did not differ significantly in terms of marital stability from other family forms (*Blake et al., 2012*; *Golombok et al., 1996*, *1999*, *2002a*, *2002b*).

Additionally, longitudinal data showed that divorce rates for heterosexual couples with children born through donated oocytes tended to be relatively stable across time (*Golombok et al., 1999*; *Murray et al., 2006*), while sperm donation families showed a slight, non-significant increase (*Golombok et al., 1995*, *1996*, *2002a*, *2002b*; *Owen and Golombok, 2009*). In contrast to this evidence, studies focusing on lesbian couples showed rising figures for separations and divorces (*Gartrell et al., 1999*, *2000*, *2006*), particularly when couples have children under the age of 10 years. However, this finding should be interpreted within the context of broader demographic trends, as research has shown that higher divorce rates among female same-sex couples are not unique to those who have children via ART. Indeed, studies across various countries have found that lesbian marriages tend to have higher dissolution rates than those of male same-sex and different-sex couples (*Ketcham and Bennett, 2019*; *Kurdek, 2008*).

Sexuality and intimacy

It was found that the child's birth does not have a negative effect on partners' interpersonal dynamics in donor-conceived families (*Gillet et al., 1996*); on the contrary, some authors stated that having a child through donor insemination had a positive influence on couples (*Durna et al., 1995*), bringing the partners closer together and fostering gratitude for the shared experiences of pregnancy and parenthood (*Applegarth et al., 1995*).

Overall, the area concerning intimacy and sexuality has been investigated by seven studies: Borneskog and colleagues showed that sexual satisfaction tended to remain stable in the first years after the child's birth in lesbian-mother families who conceived through sperm donation; additionally, in their study, this was the only area that remained steady across time in the Swedish Study on Gamete Donation longitudinal project, while a decline in general relationship satisfaction could be observed (*Borneskog et al., 2014b*). The study also indicated that heterosexual and lesbian couples showed similar positive intimate experiences. Other studies, when controlling for the type of donation (oocyte donation and sperm donation), found no significant differences in sexual satisfaction (*Sydsjö et al., 2014a*; *2014b*).

In turn, research from the NLFS suggested that child-rearing can represent a challenging experience for lesbian-mother families, with over half of the participants reporting relationship strain by the time their child reached 2 years old (*Gartrell et al., 1999*). Specifically, among these

couples, 91% felt that they had less time and energy for their relationship, and 80% experienced extended sexual inactivity after childbirth. Later on, almost all the mothers reported similar experiences (*Gartrell et al., 2000*): only 4% of the sample reported more than once-a-week sexual intercourse when the child was 5 years old, compared with 12% before pregnancy, and 70% engaged less than once a month in sexual activities.

According to mothers' reports, this appears to be the primary reason why separation rates in this longitudinal study are higher than those observed in other studies. However, other analyses carried out within the same sample (*Gartrell et al., 2006*) showed a slight increase in sexual activity when the children reached the age of 10. Additionally, 22 separated couples indicated that having a child delayed the dissolution of their relationship. This suggests that high separation rates and sexual difficulties may be more prevalent in the early years following childbirth.

Finally, another study sought to further explore the relationship between intimacy and social influence, particularly the impact of stigma (*Nachtigall et al., 1997*). However, no evidence was found to suggest that stigmatization had a detrimental effect on partners' intimacy in donor-conceived families.

Partners' agreement and couples' decision-making processes

The decision to disclose the children's origins is not generally a decisive factor for the functioning of heterosexual gamete-recipient couples. However, when examining the couple's dynamics involved in the disclosure process, it is relevant to consider both the level of agreement between the partners and the decision-making process they follow to reach their final choice. Within this review, 15 of the included studies explored the link between couples' relationship quality and the disclosure process or agreement rates regarding disclosure of donor conception (*Cook et al., 1995*; *Daniels et al., 1995*; *Freeman and Golombok, 2012*; *Gebhardt et al., 2017*; *Golombok et al., 2013*; *Klock and Maier, 1991*; *Kovacs et al., 2015*; *Lalos et al., 2007*; *Leiblum and Aviv, 1997*; *Lycett et al., 2004*; *Lysons et al., 2023*; *Nachtigall et al., 1997*; *Rodino and Sanders, 2023*; *Shehab et al., 2008*; *Widbom et al., 2022*).

Overall, several studies found no significant differences in relationship quality based on the disclosure status in donor-conceived families (*Freeman and Golombok, 2012*; *Golombok et al., 2013*; *Klock and Maier, 1991*; *Kovacs et al., 2015*; *Leiblum and Aviv, 1997*; *Lycett et al., 2004*; *Widbom et al., 2022*). Specifically, *Freeman and Golombok (2012)* found no association between disclosure decisions and relationship satisfaction or divorce rates, with no differences in satisfaction between disclosing and non-disclosing parents. Similarly, Lycett and collaborators observed that disclosure status had no significant impact on relationship functioning, such as mutual enjoyment, confiding or overall relationship quality, and most couples reported high relationship satisfaction regardless of their disclosure status (*Lycett et al., 2004*).

However, Golombok and colleagues found that non-disclosing mothers reported significantly higher levels of maternal distress (a variable including the couple's relationship quality) compared with those who disclosed, suggesting that disclosure might affect emotional well-being but not overall parenting quality (*Golombok et al., 2013*). Additionally, *Leiblum and Aviv (1997)* reported that while most couples in their study had stable marriages, some parents expressed concerns about potential stigma associated with disclosure to their children, but these concerns did not appear to significantly impact relationship quality.

Rodino and Sanders (2023) found that among partnered recipients, greater disclosure was associated with lower levels of attachment avoidance, while disclosure rates were not significantly related to attachment anxiety. These findings suggest that attachment theory, which is grounded in the study of interpersonal dynamics, emotion regulation strategies and support seeking, can help explain why and how individuals differ in their willingness to disclose involvement in donor conception. Attachment-related emotion regulation strategies can be activated within close relationships when a relational threat arises (*Mikulincer and Nachshon, 1991*; *Mikulincer and Shaver, 2016*), such as the disclosure of donor conception. As individuals with higher levels of attachment avoidance usually feel less comfortable with intimacy and are more reluctant to share personal information, they may thus be less inclined to engage in open communication about donor conception (*Rodino and Sanders, 2023*). This suggests that different attachment-related strategies may shape the disclosure process and inform recipients' decisions about openness, although further research is needed to explore these associations more fully.

As for partners' agreement rates concerning the disclosure issue, Nachtigall and colleagues found that, among 78 couples who conceived through sperm donation and asked about disclosure, 22% disagreed on whether to inform the child. In some cases, one partner was opposed, while the other was undecided or had already made up their mind (*Nachtigall et al. (1997)*. Interestingly, the decision to disclose was not related to the child's age, but couples who chose not to disclose were generally older and had been married longer. By contrast, Kovacs and colleagues found that parents who disclosed sperm donation to their children had been in their relationships slightly longer (20 years) than those who did not disclose (19.3 years), although this difference was not statistically significant (*Kovacs et al., 2015*). Other studies showed higher levels of agreement between partners on disclosure, with agreement rates ranging from 71% (*Daniels et al., 1995*) to 95% (*Shehab et al., 2008*) and 77.1% (*Lysons et al., 2023*). As for how agreement evolves over time, Lysons and co-workers explored the first 5 years of child's life and found that parents who initially agreed to disclose or not disclose generally maintained their positions after some time, with almost 60% of families who initially intended to disclose beginning to do so over time (*Lysons et al., 2023*).

In exploring the impact of partner agreement on the relationship, Gebhardt and collaborators found that couples with partial agreement on disclosure were significantly more stressed due to relationship issues than those in full agreement (*Gebhardt et al., 2017*). However, the agreement on disclosure itself did not seem to predict parenting stress. In turn, Lalos and co-worders showed that disclosure was linked to positive relationship outcomes, with the majority of parents (91%) feeling relieved and proud of being honest with their children (*Lalos et al., 2007*).

However, the decision-making process behind disclosure is complex and involves different forms of agreement. Daniels and colleagues identified several scenarios, such as both partners sharing the same view, one partner deferring to the other, or

couples acknowledging differing views but agreeing to cooperate and negotiate (*Daniels et al., 1995*). In their interview-based study, they also examined how partners' opinions were respected during the decision-making process and how couples navigated new issues over time. Finally, Shehab and collaborators found that, in disclosing couples, women were typically more favourable towards disclosure, while men often deferred to their wives, while the opposite was true in non-disclosing couples, where men tended to prefer secrecy (*Shehab et al., 2008*).

DISCUSSION

The present systematic review examined the interpersonal dynamics and relationship quality in couples who conceived through ART with donated gametes (spermatozoa, egg, embryo or double donation). Across the studies, couple satisfaction, relationship quality and stability, intimacy and the partners' agreement and decision-making processes emerged as the key themes in the analysis of the interpersonal dynamics occurring at the couple level in donor-conceived families. Despite variability in sample characteristics and study methodologies, the findings of this review offer a comprehensive summary of gamete-recipient couples and their specific experiences.

One of the central results of this review was that participants from the included studies generally tended to experience high-quality couple relationships. Relationship quality is defined as a multidimensional construct that reflects how individuals perceive and adapt to their intimate relationships, encompassing both positive and negative aspects of their connection with a partner (*Delatorre and Wagner, 2020*; *Morry et al., 2010*). Within this review, various components of the construct emerge as being considered in the current literature to examine the functioning of gamete-recipient couples, although some have been investigated more extensively than others. For example, the construct of dyadic adjustment remains underexplored (*Baiocco et al., 2018*; *Klock and Maier, 1991*; *Nachtigall et al., 1997*), despite being one of the most commonly used frameworks in the literature for analysing relational functioning between partners (*Delatorre and Wagner, 2020*).

The studies included in the present review were mainly based on results drawn from the construct of relationship satisfaction, which has been defined as the degree to which partners feel fulfilled and content in their relationship and which includes emotional, cognitive and behavioural components (*Delatorre and Wagner, 2020*; *Spanier, 1976*). Specifically, this systematic review revealed low levels of parental conflict and high levels of relational quality among gamete-recipient couples in donor-conceived families across the various stages of the family life cycle (*Cook et al., 1995*; *Freeman and Golombok, 2012*; *Golombok et al., 2002a*, *2002b*, *2004*; *Imrie et al., 2019*; *Lycett et al., 2004*; *Murray et al., 2006*; *Owen and Golombok, 2009*).

Qualitative studies included in the review provided a nuanced and in-depth understanding of the interpersonal dynamics within donor-conceived families. Most interviewees viewed their relationship as satisfactory and functional, also highlighting that reciprocal IVF in lesbian mothers' families was seen as fostering feelings of unity and equality between mothers, although maintaining parenting equality remains challenging (*Lalos et al., 2007*; *Shaw et al., 2022*). In line with previous research, Gartrell and co-workers indicated that child-rearing introduces significant stress, reducing time and energy for the couple's relationship and leading to extended periods of sexual inactivity (*Gartrell et al., 1999*, *2000*). In some cases, these strains are offset by feelings of strengthened emotional bonds, although the overall impact on relationship quality remains mixed.

Moreover, it has been found that higher relationship satisfaction within the parental couple was associated with fewer behavioural problems in children and lower levels of parenting stress (*Chan et al., 1998*; *Gebhardt et al., 2017*). According to the broader psychological literature, parental conflict can negatively affect children's emotional, cognitive and behavioural development, as well as parenting behaviours (*Cummings and Davies, 2010*: *Jiménez-Picón et al., 2021*; *Krishnakumar and Buehler, 2000*), making relationship quality crucial for family well-being.

For clinicians working with gamete-recipient couples, these findings emphasize the need to prioritize and support the couple's relationship, during and after ART treatments (*ESHRE Working Group on Reproductive Donation, 2022*). Encouraging good communication, conflict resolution skills and emotional support between partners can foster a stable and nurturing environment, reducing the risks of parental conflict. By focusing on enhancing relationship quality, clinicians can help prevent potential negative outcomes for both parents and children, promoting healthier family dynamics overall.

Most studies in this review collected data about relational stability among couples. Prior research (*Karimi et al., 2019*; *Karney and Bradbury, 1995*) has emphasized the influence of both interpersonal and intrapersonal factors on marital stability, although relationship stability does not necessarily equate to relationship quality (*Amato and Hohmann-Marriott, 2007*; *Karney and Bradbury, 1995*). Various factors contribute to stability, including individual psychological disorders that might impact partners' interactions, stressful life events and adaptive processes that shape conflict resolution strategies (*Karimi et al., 2019*; *Karney and Bradbury, 1995*).

In this review, long-lasting and stable relationships have been highlighted among both different- and same-sex gamete-recipient couples using sperm donation and oocyte donation (*Applegarth et al., 1995*; *Baiocco et al., 2018*; *Daniels et al., 1995*; *Durna et al., 1995*; *Gartrell et al., 2006*; *Imrie et al., 2019*; Klock and Mayer, 1991; *Nachtigall et al., 1997*). In addition, compared with other family forms, such as adoptive families, naturally conceiving families and families using non-donor ART treatments, gamete-recipient couples did not seem to differ significantly in terms of marital stability (*Blake et al., 2012*; *Golombok et al., 1996*, *1999*, *2002a*, *2002b*); longitudinal data also showed that divorce rates for heterosexual couples with children born through donated gametes tended to be relatively stable across time (*Golombok et al., 1995*, *1996*, *1999*, *2002a*, *2002b*; *Murray et al., 2006*; *Owen and Golombok, 2009*).

Overall, the findings of the current study suggest that using donor gametes does not inherently contribute to couples' relational instability, which carries relevant clinical implications. First, clinicians working with couples considering donor-assisted reproduction can reassure clients that, on average, relationship stability in these

families is similar to that of other family forms. As such, couple counselling or support interventions do not need to focus specifically on potential risks to relationship stability in the context of gamete donation. However, healthcare professionals should still be aware of the unique emotional, social and ethical challenges these families may face, including issues related to donor anonymity, disclosure to children or significant others and external societal pressures, which may influence relationship stability and couples' willingness to remain together over time. At the same time, relational stability may reflect the significant effort that couples themselves invest in addressing these challenges, as ART pathways involving donated gametes tend to require strong motivation, awareness and open communication to navigate the complexities of donor conception and information-sharing between partners.

Another key interpersonal aspect that emerges within the present review regards the area of sexual intimacy. Findings from the longitudinal NLFS (*Gartrell et al., 1999*, *2000*, *2006*) suggest that the presence of a child born through gamete donation seems to have a specific impact on sexuality in lesbian couples. Also, this decrease in the frequency and satisfaction towards partners' sexuality is not observed in heterosexual partners; on the contrary, it remains the only area that tends to be stable from 0 to 5 years after the child is born (*Borneskog et al., 2014a*; *Sydsjö et al., 2014a*, *2014b*). The area of sexuality thus warrants particular attention and further investigation to verify the couples' trends in this area, especially given the scarcity of studies focusing on this topic in donor-conceived families.

In clinical practice, this knowledge gap highlights the need for clinicians to proactively address concerns related to sexual intimacy, particularly in the context of gamete donation. Indeed, gamete donation and ART treatments can be emotionally and physically stressful, often involving invasive medical procedures that can affect the couple's sense of bodily autonomy (*Fusco et al., 2024*; *Papadatou et al., 2016*). The absence of traditional sexual intercourse in the conception process may also influence the couple's sense of intimacy, potentially leading to feelings of disconnection or dissatisfaction. Even after the treatment's end, these dynamics may persist, continuing to affect sexual frequency, desire and emotional closeness (*Boivin and Gameiro, 2015*; *Papadatou et al., 2016*; *Verhaak et al., 2007*). Clinical work with gamete-recipient couples should consider how these physical and emotional aspects of ART may shape sexual dynamics and relationship quality even after the end of the treatment, providing tailored support to couples and encouraging open discussions about how ART and gamete donation might have influenced their sexual relationship.

Finally, the findings of this systematic review seem to suggest that overall relationship quality within couples does not appear to be significantly associated with the disclosure of donor conception to children. Several studies found no substantial differences in relationship satisfaction, mutual enjoyment or other indicators of relationship health based on disclosure status (*Freeman and Golombok, 2012*; *Golombok et al., 2013*; *Lycett et al., 2004*). However, the decision to disclose was linked to emotional well-being, with non-disclosing mothers reporting higher levels of maternal distress (*Golombok et al., 2013*). Although only a few studies have been conducted on this topic, limiting the possibility of drawing broader conclusions, these findings highlight the complex emotional dynamics involved in the disclosure process, even if it does not seem to directly affect overall relationship functioning.

The agreement between partners on disclosure decisions also appears to be an important interpersonal factor to be considered in donor-conceived families. While earlier studies reported some disagreement on disclosure decisions (*Nachtigall et al., 1997*), other investigations generally suggest high levels of consensus among couples (*Daniels et al., 1995*; *Shehab et al., 2008*). Even in this context, qualitative studies showed the multifaceted nature of couple dynamics in donor-conceived families regarding the disclosure of donor conception. Indeed, the decision-making process itself was described as varying (*Shehab et al., 2008*), in line with previous systematic reviews (*Indekeu et al., 2013*) and meta-analyses (*Tallandini et al., 2016*) on disclosure intentions and behaviours: some couples seem to reach decisions intuitively, while others engage in discussion.

Findings from interview-based studies reported that disclosure had a generally positive impact on the couple's relationship, fostering feelings of relief and pride (*Lalos et al., 2007*), while secrecy could generate tension, particularly if one partner broke the agreement (*Daniels et al., 1995*). These dynamics suggest that relationship quality and emotional outcomes may be related to the level of partner agreement and how the disclosure decision is managed over time within the couple (*Indekeu et al., 2013*). Based on these findings, clinicians working with donor-conceived families should be aware of the presence of possible differences in partners' agreement on disclosure, supporting couples in the decision-making process and promoting greater alignment on key issues within donor-conceived families, such as the disclosure to children about their genetic origins and their conception.

According to this finding, the psychological literature on other 'non-traditional' family structures, such as adoptive families, has highlighted two key outcomes of open communication and parental agreement (*Brodzinsky, 2005*, *2006*; *Jones and Hackett, 2007*). First, research in the adoption field (*Gorla et al., 2023*; *Santona et al., 2022*) has emphasized the active role of the parental couple and the characteristics of the psychological functioning of the partners, showing how the ability to communicate openly about relevant and complex topics, such as children's origins, can support the well-being of the entire family unit. Second, open communication seems to play a role in helping children develop an integrated identity by recognizing the importance of their origins in forming a balanced and coherent self-concept (*Farr et al., 2014*; *Santona et al., 2022*). This idea is increasingly supported by evidence emphasizing the positive outcomes related to the importance of being informed about one's origins, even in the context of donor conception (*Blyth et al., 2020*; *Golombok, 2017*; *Navarro-Marshall, 2025*). From this perspective, clinical work at the couple level, aimed at facilitating agreement on specific issues in donor-conceived families, such as disclosure, becomes a point of interest and significance, as it has emerged from the analysis of the interpersonal dynamics in gamete-recipient couples (*Duff and Goedeke, 2024*; *Indekeu et al., 2013*; *Kirkman, 2003*; *Tallandini et al., 2016*; *van den Akker, 2006*).

This systematic review presents several limitations. First, while designed to ensure relevance and quality, the inclusion and

exclusion criteria may have led to the omission of relevant studies, especially those published in languages other than English. Additionally, heterogeneity across the included studies in terms of methodologies, sample sizes and outcome measures may limit the generalizability of the findings. Differences in study designs (quantitative, qualitative and mixed methods) and analytical approaches can introduce variability that may complicate extending the review findings. Another limitation is the exclusion of the 'grey literature', such as conference proceedings, technical reports and unpublished studies. As a result, valuable insights that may not be available in peer-reviewed journals were not considered, potentially affecting the comprehensiveness of the review.

This systematic review was conducted to provide an overview of the current state of research on interpersonal dynamics and relationship quality within gamete-recipient couples in donor-conceived families. Therefore, it is important to highlight relevant research areas that were found to be underrepresented within the review and offer some considerations when interpreting the findings. First, the selected studies were conducted on couples who had already given birth to donor-conceived children, and thus the findings of the present review should be limited to this specific group. Specifically, data often refer to families with children around the age of 10 years or less; in contrast, data on couples with adolescents conceived after gamete donation are more sparse and might need further investigation.

Second, it is notable that evidence on couples who are still undergoing treatment might differ from those reported in the present review, thus informing how the donation itself and the medical treatments might impact the romantic relationship. Additionally, it might be the case that the representation of gamete-recipient couples' functioning is only partial, and more studies need to be carried out on this topic. In particular, this seems to be necessary for some specific aspects of couples' relational functioning, such as sexuality and intimacy; the included studies date back to the early 2000s and they should be updated to more recent samples, taking into account how the practice of the donation itself has changed over the years.

Finally, the studies included in this review are primarily from developed countries, which provides a limited perspective on the subject, raising important questions about the issues and dynamics that may be present in other parts of the world. In particular, this underlines how ART is not equally accessible everywhere, with many regions facing barriers due to socioeconomic, cultural or legal factors, which contributes to cross-border reproductive care and a lack of social acknowledgement of donor-conceived families (*Adamson et al., 2023*; *Fusco et al., 2025*; *Indekeu and Lampic, 2021*). This disparity also suggests that ART is available only to a small portion of the global population, primarily those in wealthier, more developed nations, leaving large segments of the world's population without access to these reproductive options (*Adamson et al., 2023*). Future research should consider how these technologies can impact families across different societies and how accessibility could be improved globally to ensure that reproductive health is a right available to all.

From this review, different areas in the context of relationship dynamics in donor-conceived families were identified as they lacked representation within the included literature and deserve further investigation. The investigation of how relationship quality varies depending on the type of donation (anonymous, known donor or donation with access to the donor's identity), and whether these variations evolve over different life stages, represent a gap in the current literature. Another key area that requires further exploration is dyadic adjustment, which plays a pivotal role in defining relationship quality in the general psychological literature, with its operationalization representing one of the most used tools to assess relationship quality in psychological research over the years. Specifically, in the context of gamete donation, this variable has been underexplored. Therefore, it would be valuable to examine whether families with children conceived through gamete donation demonstrate strong adjustment capacities at the time of the child's birth and whether these capacities are predictive of how they approach subsequent life challenges.

Finally, drawing on the work of *Rodino and Sanders (2023)* regarding the role of interpersonal functioning within couples in the decision to disclose the use of donor gametes, future studies could explore whether other factors, such as the couple's intimacy, communication or commitment levels, may influence couples' willingness to disclose. More specifically, it could be further explored how the timing and the effects of disclosure — when and how offspring are informed of how they were conceived — might impact relationship dynamics, rather than focusing solely on the decision to disclose itself, providing a more comprehensive understanding of how disclosure could affect long-term relationship satisfaction and stability.

CONCLUSIONS

This paper presents a systematic review of the literature published over the past three decades regarding the quality of relationship bonds and the psychological functioning of couples conceiving through gamete donation. The need for this investigation stems from recent technological, political and legislative developments in assisted reproduction, as well as from the increasing global prevalence of ART, particularly in highly developed countries.

The review findings suggest that couples who conceive via gamete donation generally exhibit good psychological functioning, with partners reporting high levels of satisfaction in their relationship. Even in cases where satisfaction is lower, the outcomes still fall within the normal range, and only a few instances suggest potentially dysfunctional situations. In line with this, the data on relationship stability indicate that only a small percentage of donor-conceived couples experience early relationship breakdowns, with the majority of relationships maintaining long-term duration. Furthermore, these results rarely differ from those observed in other family forms or in the general population. Finally, the review has highlighted several key issues related to the functioning of donor-conceived couples that warrant further investigation in future research and should be considered in clinical practice.

SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.rbmo.2025.105105.

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