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FAMILY PROCESS

ORIGINAL ARTICLE

European gay fathers via surrogacy: Parenting, social support, anti-gay microaggressions, and child behavior problems

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Abstract

The present study investigated child behavior problems, parenting styles, coparenting, and couple relationship satisfaction in 67 European gay father families via surrogacy and 67 European heterosexual parent families via unassisted conception, all with children aged 1.5–10 years ($M = 3.57$ years, SD = 2.09). The two family groups were matched for child age and gender. In the gay father group only, the associations between family anti-gay microaggressions, family/friend support, and other main variables also were explored. Children of gay fathers had fewer externalizing and internalizing problems compared to children of heterosexual parents. Also, gay fathers reported more effective parenting styles, greater coparenting quality, and higher couple relationship satisfaction compared to heterosexual parents. Overall, child externalizing problems (i.e., aggression, rule-breaking) and internalizing problems (i.e., anxiety, depression) were more strongly associated with being raised in a heterosexual parent family, more authoritarian parenting, and lower positive coparenting. Specific to the gay father sample, anti-gay microaggressions experienced by family members were associated with more child internalizing problems, lower positive coparenting, and lower social support from family and friends. These results refute concerns about possible detrimental effects on child development of surrogacy conception or of being raised by gay fathers. The results further suggest that family therapists treating child behavior problems should focus mainly on improving the coparenting relationship, reducing authoritarian/punitive

parenting styles, and (for gay father families specifically) coping with anti-gay microaggressions and lack of social support outside the nuclear family.

KEYWORDS
child behavior problems, coparenting, gay fathers, microaggressions, parenting styles, social support, surrogacy

INTRODUCTION

Surrogacy provides a pathway to parenthood for gay individuals (Bergman, 2019). Today, most surrogacy arrangements are 'gestational' (Blake et al., 2017), relying on a donated ovum (from an egg donor) that is fertilized in vitro with the sperm of one of the intended fathers. The resulting embryo is implanted by a physician into the womb of a different woman (i.e., the gestational surrogate). The gestational surrogate then carries the fetus to term, yet has no genetic connection to the child.

Of note, very few European countries permit surrogacy. Within these countries, surrogacy is generally regulated as an altruistic service, such that the intended parents reimburse the surrogate for her pregnancy-related expenses only. For example, in the United Kingdom, surrogacy is allowed for heterosexual and gay residents only, while in the Netherlands, it is permitted for heterosexual and gay couples. In Portugal, surrogacy is allowed only for heterosexual couples with medical needs, whereas in Greece it is permitted for heterosexual couples and single women, including foreigners. Finally, surrogacy is prohibited in Austria, Finland, France, Germany, Italy, Norway, Sweden, and Switzerland, but unregulated in Belgium, the Czech Republic, Ireland, Luxembourg, and Romania. Therefore, intended gay fathers via surrogacy in many European countries must turn to cross-border surrogacy services, mostly in the United States (in specific states, only) and Canada (Bergman et al., 2010). In many cases, their journey to parenthood is emotionally, practically, and economically challenging (Bergman et al., 2010; Carone et al., 2021). Given these unique circumstances, it is especially important to examine whether the hurdles faced by gay fathers have any association with their parenting quality and the adjustment of their children.

Very few studies have explored the behavioral adjustment of children born to gay fathers via surrogacy. Some of these have focused on families in Italy (Baiocco et al., 2018; Carone et al., 2018; Carone, Baiocco, et al., 2020), while others have explored samples in the United States (Golombok et al., 2018; Green et al., 2019), Australia (Crouch et al., 2015), and Israel (Shenkman et al., 2023). The results have consistently underscored that the children in these families develop similarly to children raised in mother–father families, across different developmental domains (e.g., socioemotional functioning, gender-typed behavior) (Miller et al., 2017). Similarly, cross-cultural research has examined the transition to parenthood and parenting quality in gay fathers via surrogacy compared with lesbian mothers through donor insemination and heterosexual parents through in vitro fertilization, within France, the United Kingdom, and the Netherlands (Ellis-Davies et al., 2022; Rubio et al., 2020; van Rijn-van Gelderen et al., 2020). The results have indicated that gay fathers show high sensitivity and low intrusiveness when interacting with their children (Ellis-Davies et al., 2022); greater equality in coparenting tasks (van van Rijn-van Gelderen et al., 2020); and greater competence, enjoyment, warmth, and involvement during the transition to parenthood (Rubio et al., 2020).

Given the sparse literature on gay father families via surrogacy and the reluctance of various governments to extend surrogacy access to gay men, much remains to be known and communicated about this population (Bergman, 2019). Thus, the present study explored the behavioral adjustment of children born via surrogacy and raised by gay fathers in Europe, with respect to

children's internalizing and externalizing problems, and the associations between child behavior problems and parenting styles, coparenting, and relationship satisfaction in the parental couple. To ensure a sufficient sample size and to adequately consider the diverse cultural and legal contexts of gay fathers and their surrogacy-conceived children across Europe, families were recruited from different European countries (ILGA, 2023), including those that do not currently allow gay men access to surrogacy. This enabled us to explore whether previous results might be replicable under varied legislative contexts. Additionally, we hoped to produce evidence that might dispel prejudice and discrimination against gay fathers via surrogacy among social policymakers, as well as to provide useful, empirically-based insights for clinicians interacting with gay father families.

Although it may seem to some readers that the safety and suitability of extending access to surrogacy to gay male couples has already been established, there remains significant ignorance, prejudice, and resistance to change in many governmental, judicial, social, and mental health contexts, manifesting in policies that prohibit gay men from accessing third-party reproductive services and establishing legal parenthood in many countries around the world (ILGA, 2023). Thus, research on gay fathers via surrogacy is urgently needed to enlighten stakeholders creating legislation and regulation that negatively affect these families.

Child development in gay father families via surrogacy

Current evidence regarding child development in European gay father families via surrogacy is limited to Italian families. A multi-method and multi-informant study by Carone et al. (2018) compared externalizing and internalizing problems between 40 children born to gay fathers through surrogacy and 40 children born to lesbian mothers through donor insemination, all aged 3–9 years. In both family groups, child externalizing, and internalizing problems were within the normal range and the factors associated with more externalizing problems were the child's male gender, greater anti-gay stigmatization, and more negative parenting. Greater anti-gay stigmatization also predicted more internalizing problems. Finally, teachers reported that children of gay fathers showed significantly fewer internalizing problems than a normative sample of children.

Another Italian study found that children of gay fathers and lesbian mothers showed fewer psychological problems than children of heterosexual parents, and gay fathers described themselves as more satisfied with their couple relationship relative to heterosexual parents (Baiocco et al., 2018). These results suggest that child development is unrelated to parents' same-sex orientation and surrogacy conception, echoing other findings from U.S. research on families via adoption or assisted reproduction (for a review, see Imrie & Golombok, 2020).

The present study included similar measures as those utilized by Green et al. (2019) in the United States. These researchers administered the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2000; Achenbach & Rescorla, 2001) to 68 gay male parents via surrogacy with children aged 3–10 years, to assess children's externalizing (i.e., aggression, rule-breaking) and internalizing problems (i.e., anxiety, depression, social withdrawal). Both male and female children of gay fathers scored significantly lower on internalizing and externalizing problems than children from a normative sample matched for age, sex, race, and parents' occupational level. Daughters of gay fathers scored especially lower on internalizing problems than did daughters from the normative group. Also, gay fathers who reported less authoritarian or permissive parenting, more positive coparenting, and more support from friends had children with fewer behavior problems.

Parenting

Research on parenting by intended gay fathers as a couple (i.e., after coming out) has involved adoptive fathers, fathers via surrogacy, and informal male coparents sharing child-rearing in

a kinship-like arrangement with a third party (for a review, see Imrie & Golombok, 2020). Within the parenting domain and relevant to the present study, the concept of parenting style refers to individual differences in parental response style to situations involving one's children. The child development literature identifies two main dimensions of parent behavior: one characterized by parental acceptance, support, and warmth; and another characterized by parental control (Baumrind, 1971).

In relation to these dimensions, Baumrind (1971) identified three distinct parenting styles: authoritative, authoritarian, and permissive. *Authoritative* parents establish clear boundaries while also being warm and responsive to their children's needs. Children raised by authoritative parents tend to exhibit high levels of social competence, self-esteem, and social responsibility. On the other hand, *authoritarian* parents are described as strict, demanding, and unresponsive to their children's needs, with the result that their children often display elevated levels of anti-social behavior and anxiety. *Permissive* parents, in contrast, place few demands on their children, and their children tend to demonstrate lower levels of self-control and achievement (Grusec & Hastings, 2014). Baumrind (1991) later added a fourth parenting style, neglectful, characterized by low or no support to the child and little or no parental responsibility. This is considered the least favorable parenting style for healthy child development.

In their recent study, Neresheimer and Daum (2021) found that, compared to heterosexual parents, gay fathers via surrogacy tended to display a more authoritative style and responded with less irritation when their children show negative or problematic behavior. Similarly, in their U.S. study, Green et al. (2019) found that gay fathers via surrogacy who reported less authoritarian or permissive parenting had children with fewer behavior problems. These results align with previous research examining parenting dimensions such as warmth, discipline, sensitivity, and intrusiveness during observed play or structured activity (e.g., Carone, Baiocco, et al., 2020; Ellis-Davies et al., 2022; Golombok et al., 2018); sensitive support of children's explorations of their origins during father–child discussions about their surrogacy conception (e.g., Carone, Barone, et al., 2020); and parent-reported self-efficacy (e.g., Baiocco et al., 2018). Regardless of the parenting dimension investigated or the methodology employed, all of these studies converge on the view that gay fathers via surrogacy are as capable as lesbian mothers and heterosexual parents in their parenting role (for reviews, see Golombok, 2020; Miller et al., 2017).

The lack of observable differences in most dimensions of parenting quality based on parent gender and sexual orientation (and the superior results for gay fathers where differences have been observed; e.g., Baiocco et al., 2018; Golombok et al., 2018; Green et al., 2019) has practical and theoretical importance. On a practical level, the results alleviate societal concerns about possible detrimental effects of the combination of male gender and non-heterosexual orientation on parenting quality and, consequently, child adjustment (for a discussion, see Golombok, 2020). On a theoretical level (i.e., in the debate over specific mothering and fathering dimensions), the results support a gender-neutral model of parental constructs (Fagan et al., 2014).

Coparenting

Family systems theory holds that coparenting processes are the bedrock of family functioning and central importance to children's affective and social development (McHale, 2011; Minuchin, 1985). Coparenting encompasses the ways in which parents cooperate, support, and/or undermine each other in their reciprocal presence or absence, and how they manage triadic processes (Egeren & Hawkins, 2004; McHale, 1997). The main dimensions of coparenting are support, conflict, division of labor, parental involvement, agreement about educational aims and priorities, and triangulation (Egeren & Hawkins, 2004; Feinberg, 2009; McHale, 1997;

Teubert & Pinquart, 2010). The present study focused on three aspects of coparenting: (a) overall positive coparenting, given previous research revealing strong interrelations between all of McHale's coparenting dimensions (Green, 2019); (b) division of parenting labor (i.e., "Who does what?"); and (c) satisfaction with the division of parenting labor.

To date, associations between coparenting quality and child development in gay father families have drawn on research with adoptive families (e.g., Farr et al., 2019; Feugé et al., 2019). Only one U.S. study, conducted by Green et al. (2019), found an association between more positive coparenting and fewer child behavior problems among gay father families via surrogacy. Other research on coparenting in these families has focused on the childcare division (for a discussion, see Carone & Lingiardi, 2022). Similar to lesbian coparents, gay coparents tend to share childcare more equally than heterosexual coparents (Carone et al., 2017; Farr & Patterson, 2013; Goldberg et al., 2012; Tornello et al., 2015; van Rijn-van Gelderen et al., 2020).

Couple relationship satisfaction

Couple relationship quality and satisfaction is another dimension that, from a family systems perspective (Minuchin, 1985), may influence child adjustment. The few studies on couple relationship satisfaction among gay fathers via surrogacy have found higher levels of satisfaction relative to heterosexual parents via unassisted conception (Baiocco et al., 2018). However, more evidence can be gleaned from studies of gay men without children, showing that gay men report as much satisfaction with their dyadic relationships and tend to describe these relationships as stable and happy (D'Augelli et al., 2007; Kurdek, 2005). Also, gay male couples report a similar level of relationship conflict as heterosexual couples (Kurdek, 2005).

Stigmatization

Notwithstanding legal, medical, and societal progress, gay fathers and their children continue to experience stigmatization across diverse contexts (e.g., school, religious institutions, and healthcare organizations), and this may lead some to avoid certain social situations due to a fear of prejudice (D'Amore et al., 2020; Perrin et al., 2019). In particular, gay fathers via surrogacy must cope with dominant beliefs that children need a mother and a father to develop well, and that two gay fathers are unable to represent good gender role models (Carneiro et al., 2017). Thus, feelings of rejection and a felt need to justify oneself as a parent may affect their parental competence (Perrin et al., 2019). Similarly, the children of gay fathers via surrogacy must learn to cope with the pressure of being different from their peers in terms of their biological origins and family composition (Carone et al., 2022).

In the U.S. study by Perrin et al. (2019), 63.5% of respondents reported experiences of stigma for being a gay father and 51.2% had avoided situations out of a fear of stigma during the previous year. Most stigma had occurred in a religious environment (reported by 34.8% of respondents). Approximately 25% of respondents reported experiences of stigma in the previous year from family members, neighbors, gay friends, and/or service providers (e.g., restaurant staff, salespeople). Notably, children's school and healthcare environments were frequently reported as stigmatizing. Recent evidence reveals that perceived stigmatization is associated with reduced well-being both for children and parents (Carone et al., 2018; Goldberg & Smith, 2011; Golombok et al., 2018; Green et al., 2019).

In the abovementioned research by Carone et al. (2018) and Golombok et al. (2018), stigmatization was associated with children's externalizing problems in gay father families via surrogacy in Italy and the United States, respectively. Of relevance, parental perceived stigmatization may play an important role in couple functioning and coparenting, as found by

Green et al. (2019). In their study, gay fathers' reports of family members receiving more anti-gay microaggressions were associated with fathers' greater stigma consciousness, experiences of more anger/aggression from their spouse/partner, and less positive parenting and coparenting.

Social support

Social support is described as encouragement, love, and validation from members of one's social networks and groups (Zimet et al., 2010). Greater social support is strongly associated with psychological adjustment and relationship functioning for all couples, regardless of their sexual orientation and gender (Kurdek, 1988). Moreover, supportive relationships with friends and members of one's family of origin are linked with a positive couple relationship and better mental health (e.g., Coyne & Downey, 2003). Due to sexual prejudice and stigmatization, social support may play a central role for gay and lesbian parents (Green, 2012). The most important sources of social support for sexual minority parent families are families of origin, friends, and significant others (Green, 2019). In a pioneering study on social support among cohabiting lesbian and gay couples, participants reported that they received more support from friends than their families of origin (Kurdek, 1988). However, the inclusion of social support variables in research on gay father families via surrogacy has been very limited.

PRESENT STUDY

The present study examined child behavior problems, positive coparenting, parenting styles (i.e., authoritarian, authoritative, permissive), task sharing, satisfaction with task sharing, and couple relationship satisfaction in European gay father families via surrogacy, compared to heterosexual parent families via unassisted conception. It further explored whether gay fathers' perceptions of social support and family anti-gay discrimination were associated with child behavior problems, parenting styles, task sharing, satisfaction with task sharing, couple relationship satisfaction, and positive coparenting. Based on the above-described literature, it was hypothesized that:

1. There would be no significant differences in internalizing and externalizing problems between children born to gay fathers through surrogacy and children born to heterosexual parents via unassisted conception.
2. Compared to heterosexual parents, gay fathers would report more effective parenting (i.e., less authoritarian and permissive parenting, greater authoritative parenting), better coparenting quality (i.e., more positive coparenting, equality of task sharing, satisfaction with task sharing), and higher couple relationship satisfaction.
3. Family interaction processes would be more strongly associated with child behavior problems than would family composition (i.e., parents' sexual orientation, gender, and method of conception). In particular, less effective parenting (i.e., greater authoritarian and permissive parenting, less authoritative parenting), less positive coparenting, less equitable task sharing, lower satisfaction with task sharing, and lower couple relationship satisfaction would be associated with more child internalizing and externalizing problems.
4. In the gay father sample, more experiences of anti-gay microaggressions and lower social support from families of origin and friends would be associated with more child externalizing and internalizing problems, greater authoritarian and permissive parenting, less authoritative parenting, less positive coparenting, less equitable task sharing, lower satisfaction with task sharing, and lower couple satisfaction.

TABLE 1 Sociodemographic characteristics of participating parents ($N = 134$).

Characteristics	Full sample ($N = 134$)	Gay fathers via surrogacy ($n = 67$)	Heterosexual parents via unassisted conception ($n = 67$)	F (df)/χ^2 (df)/Fisher's exact test	p	η_p^2
		M (SD)	*M* (SD)			
Parent's age (in years)	37.68 (7.68)	41.78 (7.63)	33.58 (5.16)	52.98 (1,132)	<0.001	0.29
Child's age (in years)	3.57 (2.09)	3.52 (2.12)	3.62 (2.07)	0.07 (1,132)	0.789	<0.01
Number of children	1.59 (0.64)	1.45 (0.59)	1.72 (0.67)	5.75 (1,132)	0.018	0.04
		n (%)	*n* (%)			
Parent's gender (fathers)	72 (53.73)	67 (100)	5 (7.46)	115.39 (1)	<0.001	
Education level (≥ higher education)	111 (82.84)	65 (97.01)	46 (68.66)	17.97 (1)	<0.001	
Yearly income (≥60.001€)	45 (33.58)	28 (41.79)	17 (25.37)	4.08 (1)	0.043	
Socioeconomic status (High)	71 (52.99)	41 (61.19)	30 (44.78)	3.63 (1)	0.057	
Geographical residence				106.93	<0.001	
Austria	1 (0.75)	1 (1.49)	0			
Belgium	17 (12.69)	10 (14.93)	7 (10.45)			
Denmark	2 (1.49)	2 (2.96)	0			
France	36 (26.87)	34 (50.75)	2 (2.96)			
Germany	2 (1.49)	0	2 (2.96)			
Luxembourg	46 (34.33)	3 (4.48)	43 (64.18)			
Norway	1 (0.75)	1 (1.49)	0			
Romania	1 (0.75)	0	1 (1.49)			
Spain	14 (10.45)	14 (20.90)	0			
Sweden	1 (0.75)	1 (1.49)	0			
Switzerland	13 (9.70)	1 (1.49)	12 (17.91)			
Child's gender (% boys)	72 (53.73)	36 (53.73)	36 (53.73)	0.00 (1)	1.000	
First-born child	116 (86.57)	64 (95.52)	52 (77.61)	9.24 (1)	0.002	
Participating parent's genetic link to child	102 (76.12)	35 (52.24)	67 (100)	42.04 (1)	<0.001	

Note: Percentages may not equal 100 due to rounding.

METHOD

Sample

Sixty-seven gay fathers (one from each family) and 67 heterosexual parents (one from each family, 62 of whom were mothers)—all identifying as the primary caregiver (i.e., the parent who spent the most time with the target child and had performed the majority of the childcare duties since birth)—completed the questionnaires. Where parents shared parenting responsibilities equally and spent equal time with the child, they were asked to flip a coin to determine who would complete the questionnaires. Gay fathers were recruited through surrogacy agencies, fertility clinics, and LGBTQ+ family organizations in Europe. Heterosexual parents were recruited through flyers sent by mail and posted on Facebook, and through a snowball sampling procedure. Each gay father family was matched with a heterosexual family, according to the child age and gender. Table 1 displays participants' sociodemographic data.

The inclusion criteria for gay fathers were: (a) having a child aged 1.5–10 years who was born via surrogacy and genetically related to one of the fathers; (b) the participating father was at least 18 years old and in a current relationship with the partner or spouse with whom he had originally planned to coparent; and (c) the family was residing in Europe. In terms of residence, parents lived in 11 countries, with more gay fathers living in France and Spain and more heterosexual parents living in Switzerland and Luxemburg, Fisher's exact test = 106.93, $p < 0.001$. The questionnaires were available in French, English, and Spanish. Little's (1988) test showed that missing data were likely completely random, $\chi^2(362) = 367.84$; $p = 0.405$. Therefore, missing data were handled using multiple imputations with 20 imputations, which allowed all data to be used, even for participants with incomplete data.

The study was approved by the Ethics Committee of the Faculty of Psychological Sciences and Education, Université Libre de Bruxelles. Participants signed an online informed consent form prior to completing the questionnaires. Confidentiality was guaranteed, and all data were masked in terms of participant identity. To ensure confidentiality, participants' referral organizations were asked to send the study flyer directly to members via email. Interested parents could then go directly to the survey website without informing the respective organization, and no referring organization was given feedback about the participants.

Instruments

Child behavior problems

The *Child Behavior Checklist – Parent Report Form* (CBCL; Achenbach & Rescorla, 2000; Achenbach & Rescorla, 2001) is a widely used instrument for measuring internalizing and externalizing problems in children. The present study used the preschool form for children aged 1.5–5 years (100 items) and the school-age form for children aged 6–18 years (113 items). Both forms use a 3-point response scale ranging from 0 (*not true*) to 2 (*very true or often true*) to measure internalizing problems (i.e., somatic complaints, anxiety, depression, withdrawal; "Looks unhappy for no good reason") and externalizing problems (i.e., disruptive, aggressive, and delinquent behaviors; "Hits others"). In the present study, the reliability of the CBCL was good for both the preschool and the school-age forms ($\alpha = 0.82$ and 0.86 for internalizing, respectively; $\alpha = 0.89$ and 0.85 for externalizing, respectively).

Parenting style

The *Parenting Styles and Dimensions Questionnaire: Self-Report and Observer Versions* (PSDQ; Robinson et al., 2001) is a 64-item questionnaire that includes: (a) self-report items designed to measure the participating parent's style of parenting (i.e., authoritative, authoritarian, permissive) toward their preschool or school-age child, and (b) a set of identical items for the participating parent to report the other parent's style of parenting their preschool or school-age child. The present study used a composite score for each parenting style (i.e., authoritative, authoritarian, permissive), obtained by summing the participating parent's self-report and their report of the other parent's parenting style.

The 15 items associated with authoritative parenting measure the parent's use of reasoning and appropriate limit-setting (e.g., "Emphasize the reasons for rules"). Twelve items measure authoritarian parenting (i.e., strict, punitive) (e.g., "Uses physical punishment as a way of disciplining our child"). Finally, five items assess permissive parenting (i.e., laissez-faire, lax) (e.g., "Gives in to our child when the child causes a commotion about something"). All items are scored on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Higher scores indicate higher levels of the particular parenting style. In the present study, internal consistency reliabilities of the PSDQ scales (from the composite coparent scores) were as follows: authoritative parenting, Cronbach's $\alpha = 0.93$; authoritarian parenting, Cronbach's $\alpha = 0.84$; and permissive parenting, Cronbach's $\alpha = 0.70$.

Couple relationship satisfaction

The *Couple Satisfaction Index – Brief Form* (Funk & Rogge, 2007) is a four-item scale that measures global couple satisfaction. The first item is scored on an 8-point Likert scale ranging from 1 (*very unfortunate*) to *8* (*could not be happier*). The three remaining items are scored on a 7-point Likert scale ranging from 1 (*not at all true*) to 7 (*absolutely and entirely true*) (e.g., "I have a warm and comfortable relationship with my partner"). Higher scores indicate greater relationship satisfaction. In the present study, the scale had excellent internal consistency ($\alpha = 0.95$).

Coparenting

The *Coparenting Scale* (McHale, 1997) is a 16-item scale measuring the participating parent's perception of the couple's coparenting relationship. The scale comprises three sets of items about how the parenting couple cooperates in raising their child. The first set of questions asks how the participating parent and their partner raise their child when both parents are present (e.g., "Make an affirming or complimentary remark about this child to your partner"); the second set of items asks how the participating parent behaves with their child when their partner is absent (e.g., "Say something that brings the absent parent into your conversation in a positive way"); the last set of items surveys the degree to which the participating parent and their partner agree on their overall childrearing practices/philosophy (e.g., "How often do you and your spouse disagree about how to respond to your child's behavior?"). Items are scored on a 7-point Likert scale ranging from *1* (*absolutely never*) to *7* (*almost constantly or always*), with eight items reverse-scored. Scores for the 8 negative coparenting items are subtracted from the 8 positive coparenting items and divided by 16 (i.e., the total number of items), to calculate a total positive coparenting mean score. Higher scores indicate more positive coparenting. In the present study, the scale had acceptable internal consistency ($\alpha = 0.78$).

The present study also employed a measure of task sharing in childcare activities, in the form of the 20-item *Who Does What* (WDW) questionnaire (Cowan & Cowan, 1990). Each item in the WDW (e.g., "Reading a story to our child") is scored on a 9-point Likert scale ranging from 1 (*my partner does it all*) to 5 (*we do this equally*) to 9 (*I do it all*). Scores are centered around the midpoint, meaning that a score of 0 indicates equitable task sharing but higher or lower scores indicate an imbalance between coparents. In the present study, the scale had good internal consistency ($\alpha = 0.84$).

Finally, two items of the WDW were employed to measure overall satisfaction in the division of childcare tasks, from the perspectives of the primary parent (e.g., "Overall, how satisfied are you with the way you and your partner have divided the tasks of caring for your child?") and the partner (e.g., "Overall, how satisfied is your partner with the way you and your partner have divided the tasks of caring for your child?"), using a Likert scale ranging from 1 (*very unsatisfied*) to 5 (*very satisfied*). A mean task-sharing satisfaction score was calculated, with higher scores indicating greater satisfaction. In the present study, the scale had good internal consistency ($\alpha = 0.88$).

Family anti-gay microaggressions

The 6-item *Family Antigay Microaggressions Scale* (FAMS; Green, 2013) measures the level of microaggressions experienced by members of gay father families (e.g., "People made insensitive or ignorant comments about me, my partner, or our child because we are a gay parent family"). Items are rated on a 6-point Likert scale ranging from 1 (*never*) to *6* (*very frequently*), with higher scores indicating more microaggressions. This scale was administered to gay fathers only and had acceptable internal consistency ($\alpha = 0.70$).

Social support from family members and friends

The *Multidimensional Scale of Perceived Social Support* (MSPSS; Zimet et al., 2010) is an 8-item scale that measures perceived social support from family members (four items, e.g., "I have the emotional support and assistance I need from my family") and friends (four items, e.g., "I can count on my friends when things go wrong"). Items are scored on a 7-point Likert scale ranging from *1* (*very strongly disagree*) to *7* (*very strongly agree*), with higher scores indicating more perceived social support. In the present study, both subscales were administered to gay fathers only and had excellent internal consistency ($\alpha = 0.91$ for support from family members; $\alpha = 0.84$ for support from friends).

Statistical analyses

R software (R Core Team, 2021) was used for the analyses. Preliminarily, assumptions about the normality of the sample, the homogeneity of variance, linearity, and the absence of significantly influential outliers were checked. Also, given the significantly different geographical distribution of parents across European countries, the nonparametric Mann–Whitney *U* test was used to check whether gay fathers living in France or Spain differed from gay fathers living in other European countries on any of the study variables. The same procedure was used to check whether heterosexual parents living in Luxemburg or Switzerland differed from heterosexual parents living in other European countries on any

of the study variables. When no differences were detected, subsequent analyses were not controlled for the country of residence.

Associations among the study variables were run for the two samples, separately. To identify potential differences (hypotheses 1 and 2) in child behavior problems (i.e., externalizing and internalizing problems), parenting styles (i.e., authoritarian, permissive, authoritative), coparenting (i.e., positive coparenting, task sharing, satisfaction with task sharing), and couple relationship satisfaction as a function of family composition, three multivariate analyses of variance (MANOVAs) and one analysis of variance (ANOVA) were run, respectively. Given previous evidence of gender differences in child behavior problems—with girls showing more internalizing problems and boys showing more externalizing problems (Rescorla et al., 2007)—child gender and the interaction between child gender and family composition were included as predictors in the model with child behavior problems as outcomes.

Several multiple linear regression models were performed to examine the associations between family process variables versus family composition using child behavior problems as the criterion variable (hypothesis 3). Given the relatively limited sample size, to preserve statistical power, each sociodemographic variable that differed according to family composition (i.e., parent age, parent education, annual income, target child as the firstborn, number of children) was first introduced separately and then retained in the full models only if it demonstrated significant predictive value in isolation for the specific child behavioral outcome. To identify the model that best explained child behavior problems, the significance of the adjusted R^2 and significant changes (if any) in R^2 between models were considered.

Associations among family anti-gay microaggressions, social support, child behavior problems, parenting styles, positive coparenting, and couple relationship satisfaction in the gay father group (hypothesis 4) were explored using bivariate correlations. Finally, given the hard-to-reach study population, power analyses (using the *pwr* R package) were conducted for the four hypotheses, with an alpha of 0.05. The aim was to generate sufficient power to detect at least medium effect sizes, in line with previous studies in the field (e.g., Carone et al., 2018; Golombok et al., 2018; Green et al., 2019).

RESULTS

Table 1 displays participants' sociodemographic data, whereas Table 2 displays the associations among the study variables, by family group. No differences were detected in any of the study variables based on parents' geographical residence. The full statistics are reported in the Appendix S1.

Differences in child behavior problems, parenting style, coparenting, and couple relationship satisfaction as a function of family composition

For the purpose of concision, only significant differences are reported in the text, and the full statistical results are displayed in Table 3. Gay fathers reported fewer externalizing problems and fewer internalizing problems in their children relative to heterosexual parents. Also, gay fathers reported greater positive coparenting, more equal sharing of childcare tasks, and greater satisfaction with task sharing, compared to heterosexual parents. Finally, gay fathers showed greater authoritative parenting, lower permissive parenting, and greater couple relationship satisfaction than heterosexual parents.

TABLE 2 Associations among child behavior problems, parenting styles, coparenting, couple relationship, support from family and friends, and family antigay microaggressions, by family composition ($N = 134$).

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Child externalizing problems	1	0.29*	0.34***	0.14	−0.19	−0.45***	−0.03	−0.06	−0.14	−0.14	0.03	0.08
2. Child internalizing problems	0.63***	1	0.32**	0.02	−0.16	−0.34**	−0.11	−0.01	−0.12	−0.10	−0.11	0.27*
3. Authoritarian parenting style	0.50***	0.47***	1	0.12	−0.42***	−0.43***	−0.02	−0.01	−0.23	−0.36*	−0.27*	0.17
4. Permissive parenting style	0.27*	0.35**	0.36**	1	0.22	0.04	0.09	−0.03	−0.02	−0.11	0.02	0.06
5. Authoritative parenting style	−0.0	−0.24	−0.27*	−0.12	1	0.51***	−0.01	0.33**	0.17	0.40**	0.30*	−0.19
6. Positive coparenting	−0.40**	−0.47***	−0.44***	−0.39**	0.25*	1	−0.06	0.29*	0.37**	0.37**	0.31*	−0.26*
7. Task sharing	0.05	−0.10	−0.03	0.15	−0.08	−0.05	1	−0.12	−0.11	0.05	−0.03	−0.16
8. Task sharing satisfaction	0.01	−0.07	−0.07	−0.25*	0.18	0.18	−0.25*	1	0.11	0.17	0.14	−0.11
9. Overall couple satisfaction	−0.13	−0.29*	−0.20	−0.34**	0.18	0.70***	0.28*	0.42***	1	0.43***	0.42***	−0.15
10. Support from family	/	/	/	/	/	/	/	/	/	1	0.68***	−0.31*
11. Support from friends	/	/	/	/	/	/	/	/	/	/	1	−0.28*
12. Family antigay microaggressions	/	/	/	/	/	/	/	/	/	/	/	/

Note: Associations for the gay fathers group are displayed above the diagonal, whereas associations for the heterosexual parents group are displayed below the diagonal. / = not calculated.
*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

TABLE 3 Descriptive statistics of child's behavior problems, parenting styles, coparenting, couple relationship, support from friends and family, and family antigay microaggressions ($N = 134$).

Variable	Full sample ($N = 134$)	Gay fathers via surrogacy ($n = 67$)	Heterosexual parents via unassisted conception ($n = 67$)	F(df)	p	η_p^2
		M (SD)	M (SD)			
Child behavior problems						
Family composition				16.55 (2,129)	<0.001	0.20
Child gender				0.22 (2,129)	0.807	<0.01
Family composition * Child gender				1.24 (2,129)	0.293	0.02
Externalizing problems	7.44 (6.54)					
Family composition		4.58 (3.73)	10.30 (7.46)	32.80 (1,130)	<0.001	0.20
Child gender				0.43 (1,130)	0.512	<0.01
Girls	7.08 (7.05)	3.39 (2.20)	10.77 (8.24)			
Boys	7.75 (6.09)	5.61 (4.44)	9.89 (6.80)			
Family composition * Child gender				2.33 (1,130)	0.129	0.02
Internalizing problems	4.92 (4.76)					
Family composition		3.40 (2.57)	6.43 (5.86)	15.07 (1,130)	<0.001	0.10
Child gender				0.12 (1,130)	0.735	<0.01
Girls	4.77 (5.49)	3.03 (2.79)	6.52 (6.43)			
Boys	5.04 (4.06)	3.72 (2.36)	6.36 (4.92)			
Family composition * Child gender				0.29 (1,130)	0.593	<0.01
Parenting styles				5.25 (3,130)	0.002	0.11
Authoritarian	1.62 (0.34)	1.64 (0.30)	1.61 (0.37)	0.24 (1,132)	0.127	<0.01
Permissive	2.28 (0.54)	2.16 (0.57)	2.39 (0.49)	6.04 (1,132)	0.015	0.04
Authoritative	4.12 (0.51)	4.22 (0.47)	4.02 (0.54)	5.04 (1,132)	0.026	0.04
Coparenting				8.77 (3,130)	<0.001	0.17
Positive coparenting	1.61 (0.51)	1.70 (0.48)	1.52 (0.52)	4.21 (1,132)	0.042	0.03
Task sharing	0.59 (0.88)	0.25 (0.60)	0.92 (0.99)	22.88 (1,132)	<0.001	0.15

(Continues)

TABLE 3 (Continued)

Variable	Full sample ($N = 134$)	Gay fathers via surrogacy ($n = 67$)	Heterosexual parents via unassisted conception ($n = 67$)	F(df)	p	η_p^2
Task sharing satisfaction	4.21 (0.89)	4.37 (0.86)	4.05 (0.91)	4.22 (1,132)	0.042	0.03
Overall couple relationship satisfaction	5.16 (1.33)	5.38 (0.98)	4.93 (1.58)	3.94 (1,132)	0.049	0.03
Perceived Support						
From family	/	5.61 (1.30)	/	/	/	/
From friends	/	5.91 (0.89)	/	/	/	/
Family antigay microaggressions	/	2.29 (0.71)	/	/	/	/

Note: *Wilks'* λ was used for the multivariate analysis of variance (MANOVAs) with child behavior problems, parenting styles, and coparenting dimensions as the outcomes, whereas F was used for the analysis of variance (ANOVA) with couple relationship as the outcome. / = not calculated.

Factors associated with child behavior problems

To examine the most significant variables (i.e., family composition vs. specific family processes) and the extent to which these affected children's externalizing and internalizing problems, two separate regression analyses were computed and compared. For the sake of brevity, only the best-fitting models are described below, while Table 4 reports the complete fit indices and details of the models. When externalizing problems were considered as an outcome, model 2 demonstrated the best fit, given that the change in explained variance from model 2 to model 3 was not significant ($p = 0.172$). Model 2 explained 41% of the variance, with more child externalizing problems associated with a more authoritarian parenting style ($\beta = 0.21$, SE = 0.08, $p = 0.009$), lower positive coparenting ($\beta = -0.27$, SE = 0.09, $p = 0.005$), and a heterosexual family composition (i.e., children of heterosexual parents scored higher on externalizing problems) ($\beta = -0.54$, SE = 0.18, $p = 0.003$).

Regarding children's internalizing problems, model 3 demonstrated the best fit, given that the increase in R^2 was significant ($p = 0.035$) and explained 30% of the variance. Specifically, the factors significantly associated with children's greater internalizing problems were, once again, a more authoritarian parenting style ($\beta = 0.44$, SE = 0.11, $p < 0.001$), lower positive coparenting ($\beta = -0.39$, SE = 0.14, $p = 0.007$), and family heterosexual composition (i.e., children of heterosexual parents through unassisted conception scored higher on internalizing problems) ($\beta = -0.55$, SE = 0.19, $p = 0.004$).

Associations among family anti-gay microaggressions, social support, parenting styles, coparenting, and couple relationship satisfaction in the gay father group

Bivariate correlations were calculated to explore the influence of family anti-gay microaggressions and support from family members and friends on gay fathers' parenting styles, coparenting, and couple relationship satisfaction. Table 2 reports the full statistics.

Power analysis

Full details about the power analysis are reported in the Supplemental Material. Overall, following Cohen's (1988) indications, the sample was large enough to detect large (e.g., $d = 0.80$), medium (e.g., $d = 0.50$), and small (e.g., $d = 0.20$) effects, except in regression models 2 and 3, as well as in bivariate correlations, for which small effects were unlikely to be detected.

DISCUSSION

The present study aimed at comparing the parental reports of child behavior problems in a sample of European gay fathers via surrogacy with those of a sample of European heterosexual parents via unassisted conception matched for child gender and age. It also examined whether positive coparenting, parenting styles (i.e., authoritarian, permissive, authoritative), task sharing, and couple relationship variables were associated with children's externalizing and internalizing problems in the two family groups.

Regarding the first hypothesis about children's behavior problems, the results indicated that children of gay fathers via surrogacy showed fewer externalizing and internalizing problems compared to children of heterosexual parents via unassisted conception. Although the first hypothesis was not confirmed (because children of gay fathers functioned better than, rather than merely equal to, children of heterosexual parents), the results align with previous

TABLE 4 Factors associated with children's externalizing and internalizing problems, and model fit indices ($N = 134$).

	DV: Externalizing problems					DV: Internalizing problems				
	β (SE)	CI [2.5%, 97.5%]	p	Adj R^2	ΔR^2	β (SE)	CI [2.5%, 97.5%]	p	Adj R^2	ΔR^2
Model 1										
Family composition	−0.59 (0.19)	−0.97, −0.22	0.002	0.23***		−0.63 (0.20)	−1.01, −0.24	0.002	0.09***	
Parent education	−0.23 (0.08)	−0.40, −0.07	0.006			/	/	/		
Parent age	−0.09 (0.09)	−0.27, 0.09	0.320			−0.01 (0.10)	−0.20, 0.19	0.928		
Model 2										
Family composition	−0.54 (0.18)	−0.90, −0.18	0.003	0.41***	0.21***	−0.55 (0.19)	−0.93, −0.18	0.004	0.27***	0.22***
Parent education	−0.11 (0.08)	−0.26, 0.05	0.180			/	/	/		
Parent age	−0.16 (0.08)	−0.32, 0.01	0.065			−0.04 (0.09)	−0.22, 0.14	0.650		
Authoritarian parenting style	0.21 (0.08)	0.05, 0.37	0.009			0.33 (0.09)	0.16, 0.50	<0.001		
Permissive parenting style	0.14 (0.07)	−0.01, 0.28	0.065			0.05 (0.08)	−0.11, 0.211	0.531		
Authoritative parenting style	−0.02 (0.08)	−0.18, 0.14	0.803			0.09 (0.09)	−0.09, 0.26	0.323		
Positive coparenting	−0.27 (0.09)	−0.45, −0.08	0.005			−0.28 (0.10)	−0.49, −0.08	0.006		
Task sharing	−0.08 (0.08)	−0.24, 0.09	0.362			0.04 (0.08)	−0.13, 0.21	0.652		
Task sharing satisfaction	0.02 (0.07)	−0.12, 0.17	0.749			0.05 (0.08)	−0.12, 0.21	0.561		
Overall couple relationship satisfaction	−0.03 (0.09)	−0.21, 0.15	0.758			0.09 (0.10)	−0.11, 0.28	0.370		
Model 3										
Family composition	−0.56 (0.18)	−0.91, −0.20	0.003	0.41***	0.02	−0.55 (0.19)	−0.91, −0.18	0.004	0.30***	0.04*
Parent education	−0.08 (0.08)	−0.23, 0.08	0.340			/	/	/		
Parent age	−0.16 (0.08)	−0.33, <0.01	0.052			−0.04 (0.09)	−0.22, 0.13	0.623		
Authoritarian parenting style	0.29 (0.10)	0.09, 0.50	0.005			0.44 (0.11)	0.22, 0.65	<0.001		
Permissive parenting style	0.12 (0.07)	−0.03, 0.27	0.105			0.03 (0.08)	−0.13, 0.19	0.733		
Authoritative parenting style	−0.03 (0.08)	−0.19, 0.12	0.676			0.07 (0.09)	−0.10, 0.24	0.444		
Positive coparenting	−0.34 (0.13)	−0.60, −0.08	0.012			−0.39 (0.14)	−0.67, −0.11	0.007		

TABLE 4 (Continued)

	DV: Externalizing problems					DV: Internalizing problems				
	β (SE)	CI [2.5%, 97.5%]	p	Adj R^2	ΔR^2	β (SE)	CI [2.5%, 97.5%]	p	Adj R^2	ΔR^2
Task sharing	−0.07 (0.08)	−0.24, 0.09	0.367			0.05 (0.08)	−0.12, 0.21	0.570		
Task sharing satisfaction	0.03 (0.08)	−0.12, 0.17	0.732			0.04 (0.08)	−0.12, 0.21	0.589		
Overall couple relationship satisfaction	−0.01 (0.09)	−0.19, 0.18	0.949			0.13 (0.10)	−0.08, 0.33	0.222		
Family composition × Authoritarian style	−0.21 (0.16)	−0.52, 0.10	0.191			−0.29 (0.17)	−0.62, 0.04	0.083		
Family composition × Positive coparenting	0.11 (0.17)	−0.22, 0.43	0.520			0.18 (0.18)	−0.18, 0.53	0.330		

Note: For child externalizing problems, Model 2 was the one that best fit the data, given that the change in R^2 from Model 1 to Model 2 was significant and explained significant variance (41%), while the change in R^2 from Model 2 to Model 3 was not significant. For child internalizing problems, Model 3 was the one that best fitted the data, given that the change in R^2 from Model 2 to Model 3 was significant and explained significant variance (30%). Parent education was not entered in the models predicting child internalizing problems as it did not have a significant effect when tested in isolation ($p = 0.843$). Family composition was coded as 1 = heterosexual parents, 2 = gay fathers. / indicated that the variable was not entered in the model.

*$p < 0.05$. ***$p < 0.001$.

research showing healthy child development among gay father families via surrogacy (Carone et al., 2018; Golombok et al., 2018; Green et al., 2019; Shenkman et al., 2023).

Several explanations for this finding have been proposed in the literature. First, as noted by Green et al. (2019), whereas some children born to heterosexual parents are conceived by accident, children of gay male parents via surrogacy are always planned, wanted, and the result of a long, complex, expensive journey marked by sustained effort and sometimes many challenges (linked to fathers' families of origin, friends, and colleagues). The surrogacy journey also requires gay fathers to spend significant time with the surrogacy agency, surrogate, surrogate's husband/partner, psychologists, physicians, case workers, and attorneys. Thus, it is reasonable to assume that gay parents who pursue this pathway to parenthood are extremely motivated to have children, financially successful, and capable of bringing complex plans to fruition.

Second, gay fathers appear to spend approximately twice as much time with their children relative to fathers in heterosexual couples (Prickett et al., 2015). Children may benefit from this high paternal commitment, which may also be associated with higher quality time, due to gay fathers' higher average socioeconomic status, motivation, satisfaction, and self-efficacy (Baiocco et al., 2018; Fantus, 2021; Shenkman et al., 2022). Such quality time spent with children may, in turn, result in fewer child problem behaviors.

Third, gay fathers may benefit from a more favorable financial environment, which has been shown to be associated with fewer child behavior problems. Finally, it is interesting to note that the present study found no child gender * family composition effect, which is different from the results of Green et al. (2019). Both the present study and Green et al.'s U.S. study found that daughters and sons conceived via surrogacy by gay fathers showed significantly fewer internalizing and externalizing behavior problems than daughters and sons conceived by heterosexual parents. However, the positive results for daughters were somewhat more marked in Green et al.'s (2019) study. Further research would be needed to decipher the meaning of this difference in the European and U.S. samples.

In line with the second hypothesis, gay fathers in the present study reported more effective parenting styles (i.e., less permissive and more authoritative parenting) than heterosexual parents. This result is consistent with recent research conducted in diverse countries (e.g., Italy, Israel, the United States), indicating more parental competence and efficacy among gay fathers compared to heterosexual parents (Baiocco et al., 2018; Green et al., 2019; Shenkman et al., 2023). Also, similar to what was previously noted for child behavior problems, the greater time spent with children may have made gay fathers more effective parents.

Gay fathers also reported more positive coparenting, more equal task sharing, greater satisfaction with task sharing, and greater couple relationship satisfaction relative to heterosexual parents. This echoes previous research on the division of labor among couples with diverse sexual orientations, showing that gay fathers (and lesbian mothers) typically report less specialized patterns of household and childcare labor division compared to heterosexual couples (Farr & Patterson, 2013; Goldberg et al., 2012; Tornello et al., 2015). In contrast, heterosexual two-parent families usually enact a traditional, gendered division of household and childcare labor. Gay fathers (and lesbian mothers) may be less likely to conform to traditional gender roles and more likely to be voluntarily involved in child caregiving (Carone & Lingiardi, 2022).

The finding of greater couple relationship satisfaction among gay fathers is consistent with previous research (Baiocco et al., 2018). Although gay couples with no children were once presumed to be less stable and satisfied than married, heterosexual couples (Kurdek, 2005), the decision to undertake parenthood and pursue it via a less socially accepted path (i.e., surrogacy) implies investment in a very stable and satisfying relationship, which may be even stronger among gay male partners who raise children together.

Partly consistent with the third hypothesis, parents who reported more authoritarian parenting and perceived lower positive coparenting had children with more internalizing and externalizing problems. To the extent that these results are similar to previous ones, they indicate

that the determinants of child outcomes are similar across diverse family forms (McHale, 2011) and national contexts. Family composition also was found to be associated significantly with child behavior problems, even when entered together with coparenting, parenting styles, and couple relationship satisfaction. Specifically, being raised in a heterosexual, two-parent family through unassisted conception was associated with more child externalizing and internalizing problems.

Of note, the result that the β value of family composition was higher than the β values of authoritarian parenting and positive coparenting suggests that family composition may be fundamental to understanding children's functioning in these families. However, because the group of participating heterosexual parents consisted of mainly mothers (92.50%), an alternative interpretation could be that heterosexual mothers have a greater capacity to detect behavior problems in their children due to the different ways in which women and men are socialized (Fagan et al., 2014). It remains unclear whether Fagan et al.'s explanations for heterosexual mothers apply to lesbian and gay parents, as well.

Finally, as predicted by the fourth hypothesis, both family anti-gay microaggressions and social support were associated with child behavior problems, parenting styles, coparenting, and couple relationship satisfaction. Specifically, as also found by Carone et al. (2018), fathers' experiences of anti-gay microaggressions were associated with more child internalizing problems. Furthermore, anti-gay microaggressions were inversely related to positive coparenting, whereas support from family members and friends was positively associated with positive coparenting and couple relationship satisfaction. Lastly, gay fathers who perceived greater support from family members and friends reported more authoritative and less authoritarian parenting. These results confirm the importance of considering experiences of anti-gay microaggressions and social support when examining parent, child, and couple functioning among gay father families via surrogacy. Also, the findings are consistent with research on gay father families across diverse cultural contexts, such as the United States (Golombok et al., 2018; Green et al., 2019), Australia (Crouch et al., 2015), Italy (Carone et al., 2018), and Israel (Shenkman et al., 2023).

The present results should be interpreted considering several limitations of the study. First, the two groups of families were not evenly distributed across Europe, as most heterosexual parent families were based in Luxembourg, and most gay father families were based in France. Although preliminary checks within groups found no national differences in any of the study variables, the results of the family group comparison might nonetheless reflect the effect of not only family structure but also country of origin. This possibility cannot be ruled out, given recent evidence of a significant country effect on parenting behavior in lesbian, gay, and heterosexual parents through assisted reproduction in France, the Netherlands, and the United Kingdom (Ellis-Davies et al., 2022).

Future research involving larger samples of gay and heterosexual parent families should control for this potential effect. Second, as in all previous studies with sexual minority parents via surrogacy, it was not possible to disentangle the nested predictors of child development, and particularly parents' sociodemographic factors. Sexual orientation, level of education, and income are inseparably linked to the economics of surrogacy, as the cost of surrogacy is prohibitive for most intended parents in Europe, the United States, and elsewhere. The removal of one variable from this three-variable "package" may create an artificial splitting of what usually co-occurs in reality. Given the high cost of surrogacy, finding a sample of gay fathers via surrogacy whose education levels and incomes match those of heterosexual parents is nearly impossible, although Green et al. (2019) were able to partially do so by matching parental occupations using the CBCL national database. Thus, the present study's conclusions should be interpreted with caution, due to the potential non-representativeness of the volunteer multi-national sample and the unavoidable fact that surrogacy families are especially affluent.

Furthermore, as also applied to Green et al. (2019), the heterosexual primary caregivers in the present study were typically mothers. It is possible that the conflation of parent gender and caregiving role in the two types of families may have affected the results (for discussion, see Carone & Lingiardi, 2022). Despite these differences, the two comparison samples (i.e., gay father families vs. heterosexual parent families) seemed reasonably representative of their respective populations in the general population.

Relatedly, the comparison between gay fathers via surrogacy and heterosexual parents via unassisted conception did not allow for an examination of the effects of parental gender and sexual orientation separately from the method of conception. The inclusion of heterosexual parents via surrogacy would have enabled a different kind of comparison. However, due to societal disapproval of surrogacy and restrictive laws in certain countries (Brunet et al., 2013), heterosexual parents via surrogacy may have been reluctant to disclose their method of conception and to participate in the research. Conversely, although gay fathers face similar critical scrutiny, they may be more motivated to contribute to evidence regarding their unique family structure, especially considering the limited access to assisted reproduction for sexual minority individuals in most European countries.

Because of the difficulty involved in recruiting heterosexual parents via surrogacy, to the best of our knowledge, only one research group (in the United Kingdom) has examined parenting and child development in this population (Golombok, 2020). Most heterosexual parents who utilize surrogacy do so only after years of fertility treatment, and many experience a sense of loss or failure after their repeatedly unsuccessful efforts to conceive or carry a child to term. In contrast, gay fathers' surrogacy experiences may be viewed as inherently positive, rather than a "last resort" following unsuccessful infertility treatment (Bergman, 2019; Golombok, 2020). These very different contexts for pursuing parenthood via surrogacy would make comparisons between gay and heterosexual parents (and their children) via surrogacy difficult to interpret.

Another limitation of the study is the use of parent self-reports to describe child behavior problems and other variables. However, in an earlier study, Carone et al. (2018) found that parent and teacher reports of child behavior problems converged, and gay (and lesbian) parents did not underreport their children's behavior problems. Ideally, future studies should include reports from both parents, as well as teachers and other external observers (e.g., clinicians). In addition, our power analysis revealed that our sample size was sufficiently large to detect medium and large effect sizes, but not small effects. Also, this is in line with previous research in the field (e.g., Carone et al., 2018; Farr et al., 2019). The use of dyadic and triadic observational measures of family interactions, as well as qualitative interviews with older children, would provide further insight into family functioning across different child ages. Lastly, the inclusion of gay single fathers by choice, divorced gay parents, gay stepfathers, and primary caregiving heterosexual fathers would enable an investigation of how each of these parenting configurations might differentially contribute to child development.

CONCLUSIONS AND CLINICAL IMPLICATIONS

The present study contributes to the growing literature on the role played by coparenting, parenting styles, and couple relationship satisfaction in child development in the small (but growing) population of gay father families through surrogacy across several European countries. To the best of our knowledge, the family therapy literature makes no specific reference to clinical work with the children of gay fathers through surrogacy.

In line with previous research, the present findings show that the children of gay fathers via surrogacy seem to function better, on average, than the children of heterosexual parents.

However, within gay father families, it remains the case that experiences of anti-gay microaggressions are associated with more child behavior problems, less positive coparenting, and less social support from friends and families of origin. Family therapy, family of origin sessions, couple therapy sessions, and family psychoeducational and support programs may help family members learn to deal with anti-gay and/or anti-surrogacy slights, insults, and attacks, as well as to help families cope with a lack of socioemotional support from their families of origin (where needed).

In most other regards, the dynamics of gay father families seem very similar to those of heterosexual families. Better functioning was associated with more authoritative, less authoritarian, and less permissive parenting styles; a more positive coparenting relationship; and more couple relationship satisfaction. However, gay father families through surrogacy may suffer from anti-gay microaggressions and, as a result, experience varying degrees of hypervigilance, exclusion, anxiety about safety, and distress related to bullying. In this regard, family therapists should seek to recognize the unique challenges faced by gay father families and teach such family members some successful ways of coping with these stressors and of building more social support (Green et al., 2019; Madsen & Green, 2012).

Finally, the present sample was comprised of gay fathers from different European countries, and the results are consistent with all relevant research conducted in the United States, Italy, Australia, and Israel. These converging results refute concerns about the psychological adjustment of children raised by gay fathers (i.e., without mothers and conceived via in vitro fertilization and gestational surrogacy). Accordingly, prohibitions against surrogacy for gay males seem entirely based on prejudice, with no basis in social science research.

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SUPPORTING INFORMATION

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