

Children raised in mother-headed families from infancy: a follow-up of children of lesbian and single heterosexual mothers, at early adulthood

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BACKGROUND: The present investigation constituted the third phase of a longitudinal study of the quality of parent–child relationships and the psychological adjustment of children in female-headed families with no father present from infancy.

METHODS: In this study, 27 families headed by single heterosexual mothers (solo mothers) and 20 families headed by lesbian mothers were compared with 36 two-parent heterosexual families as the child entered adulthood. Data were obtained from mothers and their young adult children by standardized interviews and questionnaires.

RESULTS: The female-headed families were found to be similar to the traditional families on a range of measures of quality of parenting and young adults' psychological adjustment. Where differences were identified between family types, these pointed to more positive family relationships and greater psychological wellbeing among young adults raised in female-headed homes.

CONCLUSIONS: The findings of this study show that children raised by solo heterosexual mothers or lesbian mothers from infancy continue to function well as they enter adulthood. The findings are of relevance to the UK Human Fertilisation and Embryology (2008) Act.

Key words: solo mothers / lesbian mothers / parenting / child development

Introduction

In the Human Fertilisation and Embryology (2008) Act, the clause in the original (1990) Act that required licensed clinics to consider the child's need for a father in the decision to offer fertility treatment has been substituted with a clause that simply requires consideration of the child's need for supportive parenting. As a result, there is likely to be a marked increase in the number of children born through donor insemination to single heterosexual women, single lesbian women and lesbian couples. These children will be raised without a father from birth.

Research has consistently shown that children in single-parent families are at greater risk for emotional and behavioural problems, and for poor academic achievement, than are children from traditional two-parent homes (for reviews see Amato, 2000; Pryor and Rodgers, 2001; Coleman and Glenn, in press). However, these studies have largely focused on single-mother families that have resulted from

parental separation or divorce. In an examination of four nationally representative samples in the USA, McLanahan and Sandefur (1994) showed that adolescents raised by single mothers during some period of their childhood were twice as likely to drop out of high school, twice as likely to have a baby before the age of 20 and one and a half times more likely to be out of work in their late teens or early twenties than those from a similar background who grew up with two parents at home. Similarly, the National Child Development Study in the UK, which has followed up a large general population sample of children born in 1958, found that children from single-parent families were at greater risk for psychological problems than a matched group of children from intact families not only in childhood (Ferri, 1976) but also in early adulthood (Chase-Lansdale *et al.*, 1995) and middle age (Elliot and Vaitilingam, 2008). Most recently, an investigation of single-mother families from the Avon Longitudinal Study of Pregnancy and Childhood (ALSPAC), a representative community study of 14 000 mothers and their children born in the 1990s in

the UK, also found that children from single-parent families showed higher levels of psychological disorder than their counterparts from two-parent homes (Dunn *et al.*, 1998). Although most epidemiological studies of father-absent families have focused on children's psychological adjustment, children's gender development has also been investigated using the ALSPAC sample, with no differences in gender role behaviour identified between children in single-mother families and children in traditional families for either boys or girls (Stevens *et al.*, 2002). This finding contradicts the widely held assumption derived from classic psychoanalytic and social learning theories that father-absent boys will be less masculine, and girls less feminine, than their father-present peers.

A key question that arises from these investigations is whether children from single-mother families show poorer psychological adjustment because of the absence of a father or whether other factors are involved. A number of influential factors have been established including financial hardship, mothers' lack of social support and children's exposure to conflict and hostility between parents before, during and sometimes after separation or divorce (Amato, 2000; Pryor and Rodgers, 2001). The negative psychological consequences for children of parental separation or divorce are mediated to a large extent through parenting (Hetherington *et al.*, 1998; Coleman and Glenn, *in press*). In the study by Dunn *et al.* (1998), negative feelings towards their child were greater among single mothers than among mothers in two-parent families, and were associated with more behavioural problems in children. Other factors that were found to contribute to children's psychological difficulties included multiple family transitions, lack of contact with the non-resident father, poor family communication and ongoing conflict between the mother and non-resident father (Dunn, 2008). Children in single-parent families also experience less discipline and monitoring from their mother than do children in two-parent families (McLanahan and Sandefur, 1994), often associated with increased conduct problems (Patterson *et al.*, 1992), and no discipline from their father, an aspect of parenting that is often associated with the paternal role. The poorer quality of parenting shown by single mothers may be explained, at least in part, by higher rates of psychological problems, particularly depression (Dunn *et al.*, 1998). Depression interferes with parents' emotional availability and sensitivity to their children and also with their control and discipline of them (Cummings and Davies, 1994), with depressed parents tending either to be very lenient with their children or very authoritarian, often switching between the two (Kochanska *et al.*, 1997).

There has been much controversy about access to assisted reproduction by single heterosexual women. Concerns are based on the research described above showing negative outcomes in terms of cognitive and socio-emotional development for children raised by single mothers. However, these outcomes cannot necessarily be generalized to children born to single mothers by donor insemination. The situation of these mothers is different from that of single mothers who have separated or divorced, or who became pregnant unintentionally, in that they are generally financially secure with good social support, and the children have not been exposed to parental conflict or family disruption (Murray and Golombok, 2005; Jadva *et al.*, *submitted*). Nevertheless, other pressures, such as social stigma, may interfere with parenting in these families, leaving the children vulnerable to emotional or behavioural problems. Moreover, from the

perspective of the child, little is known about the psychological consequences of discovering that their father is a sperm donor whom they may never meet. The combination of two non-traditional pathways to parenthood—donor insemination and single motherhood—together with the absence of a known father, may place these children at increased psychological risk.

An alternative way in which mother-headed families can be formed is when lesbian women become mothers, either singly or with a partner. Research on lesbian mother families was initiated in the 1970s and concentrated on women who had become mothers within a heterosexual marriage before making the transition to a lesbian relationship (Kirkpatrick *et al.*, 1981; Golombok *et al.*, 1983; Green *et al.*, 1986). At that time, previously married lesbian women who fought for custody of their children when they divorced were, without exception, denied custody on the grounds that this would not be in the best interests of their children. Early investigations addressed the two main concerns raised in custody disputes; firstly, that children would be teased and bullied by their peers and would develop psychological problems as a result and, secondly, that children would show atypical gender development, i.e. that boys would be less masculine, and girls less feminine, in their identity and behaviour than their counterparts from heterosexual homes. A further issue was that children of lesbian mothers may adopt a lesbian or gay identity in adulthood which was considered to be a negative outcome by Courts of Law.

Regardless of the geographic or demographic characteristics of the samples studied, the findings of the early investigations were strikingly consistent (Kirkpatrick *et al.*, 1981; Golombok *et al.*, 1983; Green *et al.*, 1986). Children with lesbian mothers did not show a higher incidence of psychological disorder or difficulties in peer relationships than children from heterosexual homes, and there was no evidence of gender identity confusion or atypical gender role behaviour (Patterson, 1992; Golombok, 1999). Individuals raised as children in lesbian families continued to function well in adult life, and the large majority identified as heterosexual (Golombok and Tasker, 1996; Tasker and Golombok, 1997). The latest wave of studies of children in lesbian mother families has examined general population samples in the USA (Wainright *et al.*, 2004) and the UK (Golombok *et al.*, 2003). As in earlier investigations, the children were found to be functioning well with no differences in gender-role behaviour between children of lesbian parents and children of heterosexual parents for either boys or girls. However, these studies focused on children born in the context of a heterosexual relationship from which the mother later made the transition to a lesbian household, often when the children were approaching or had reached school age. To the extent that early experience influences children's later psychological development, the findings of these studies cannot be generalized to children conceived by donor insemination and raised in lesbian families from birth.

The aim of the present investigation was to examine the quality of parent-child relationships and the psychological adjustment of children in female-headed families with no father present from birth or early infancy; families headed by single heterosexual mothers (solo mothers) and families headed by lesbian mothers were studied in comparison with two-parent heterosexual families. Phase I was conducted in early childhood at age 6 (Golombok *et al.*, 1997) and Phase II was conducted in early adolescence at age 12 (Golombok *et al.*, 2004). The absence of a resident father from infancy was not

found to have negative consequences for the psychological wellbeing of the children or for the quality of mother-child relationships, apart from the children perceiving themselves as less competent and the mothers reporting more severe disputes with their children at adolescence. In fact, the differences identified between the family types indicated more positive outcomes in mother-headed families; these children experienced a higher level of interaction with their mother at ages 6 and 12, and perceived her as more available and dependable. The lesbian and single heterosexual mother families were found to be similar to each other with respect to parenting and children's development. The present study focuses on Phase III, conducted when the children were entering adulthood at around age 18, the time at which many young people are entering the workforce or higher education, leaving home and becoming involved in intimate relationships. Ethical approval was obtained from the University of Cambridge Psychology Research Ethics Committee and written informed consent was obtained from mothers and their young adult children.

Methods

Phase III involved 27 solo mother families, 20 lesbian mother families and 36 traditional families (i.e. two-parent heterosexual families), representing 71, 60 and 95%, respectively, of the families assessed at Phase II (see Table 1). Of those who did not participate, around half had died or could not be traced and the other half declined or did not reply. Only four of the solo or lesbian mothers actively declined the invitation to take part. There were also 20 young adults from solo mother families, 18 young adults from lesbian mother families and 32 young adults from traditional families also took part in the study. Of those young people who did not participate, the large majority were overseas at the time of data collection. Three young adults from solo mother families and two young adults from lesbian mother families were in contact with their father.

There were similar proportions of boys and girls in each family type. However, the age of the young adults differed between groups, $F(2, 76) = 14.86$, $P < 0.001$. The young adults from single-mother families were the oldest (mean age 19.5 years), followed by those from lesbian families (mean age 19 years) with those from two-parent heterosexual families being the youngest (mean age 18 years). Reflecting this age difference, significantly more of the young adults from solo and lesbian mother families than from traditional families had left home $\chi^2(6) = 20.99$, $P < 0.05$, with 42% from solo mother families, 32% from lesbian mother families and 6% from traditional families having done so. A significant difference was also found for mother's age, $F(2, 76) = 5.24$, $P < 0.01$, with the lesbian mothers and mothers from traditional families being the oldest (mean age 52 years) and the solo mothers being the youngest (mean

age 48 years). There was no difference between family types with respect to social class as measured by mother's occupation rated according to a modified version of the Registrar General's classification ranging from 1 (professional/managerial) to 4 (partly skilled or unskilled). The large majority of mothers in each family type were in professional, managerial or skilled non-manual occupations. A significant difference between family types was found for the presence of siblings, $\chi^2(4) = 29.7$, $P < 0.001$, with fewer of the young adults from solo and lesbian mother families having siblings than those from traditional families. Eleven lesbian mothers cohabited with their female partner and two young adults from solo mother families had lived with a stepfather since their junior school years. Due to the small sample of lesbian families, it was not possible to carry out comparisons according to the number of mothers in the home.

Mothers' interview and questionnaires

Mothers were interviewed using an adaptation of a standardized interview designed to assess the quality of parenting (Quinton and Rutter, 1988). The biological mother was interviewed in lesbian families as only half of these families were headed by two parents. Detailed accounts of the young adult's behaviour and the mother's response to it were obtained, with reference to the young adult's personality and family relationships. Information obtained by interview was rated according to a standardized coding scheme to produce the following variables: *expressed warmth* was rated on a 6-point scale from 1 (none) to 6 (high) and took account of the mother's tone of voice and facial expressions in addition to her verbal report of her relationship with the young adult; *emotional involvement* was rated on a 5-point scale from 1 (little or none) to 5 (enmeshed) and took into account the extent to which the mother was overconcerned or overprotective toward the young adult, and the extent to which the mother had interests apart from those relating to her child; *sensitive responding* was rated on a 5-point scale from 0 (none) to 4 (very sensitive responding) and represented the mother's ability to recognize and respond appropriately to the young adult's fears and anxieties; *supervision* was rated on a 5-point scale from 0 (very inadequate) to 4 (over-supervised) and took account of the mother's monitoring of the young adult's activities; *control* assessed the degree of maternal control of the young adult on a 5-point scale ranging from 1 (little or no control, mother dominated by child) to 5 (over-controlling, restrictive parenting); *severity of disputes* was rated on a 4-point scale from 0 (no confrontations) to 3 (major battles) and assessed the intensity of disputes during conflict with the young adult and *disciplinary indulgence* was rated on a 6-point scale from 1 (none) to 6 (indulgent) and assessed the degree of negotiation between the mother and young adult with regard to control issues. In the previous phase of this study conducted in early adolescence, 57 randomly selected interviews were coded by a second interviewer who was 'blind' to family type (Golombok et al., 2002). Agreement between raters ranged from 95 to 100% for all the variables used, with non-agreement defined as a > 1 -point difference on any scale.

Table 1 Number of mothers and children participating at each phase of the study

	Solo mother families		Lesbian mother families		Traditional families	
	Mothers (n)	Children (n)	Mothers (n)	Children (n)	Mother (n)	Children (n)
Phase I—early school age	42	42	30	30	41	41
Phase II—early adolescence	38	37	25	37	38	38
Phase III—early adulthood	27	20	20	18	36	32

In addition to the interview, mothers completed the Parents of Adolescents Separation Anxiety Scale (PASAS) (Hock et al., 2001) to assess the parental emotions associated with separation. The scale produces two subscale scores (i) *anxiety about adolescent distancing*, a measure of the extent to which the parent feels worried about the young adult's developing autonomy and (ii) *comfort with secure base role*, a measure of how secure the parent feels with respect to his or her relationship with the young adult. Mothers also completed the Conflict Behaviour Questionnaire (CBQ) (Prinz et al., 1979), an assessment of conflict between the parent and adolescent. The CBQ produces two subscale scores (i) *dissatisfaction with the adolescent's behaviour* and (ii) *parent-adolescent conflict interaction*.

Young adults' interview and questionnaires

The young adults were interviewed using the Child and Adolescent Functioning and Environment Schedule (John and Quinton, 1991), a standardized semi-structured interview designed to obtain information on the young adult's relationships with parents and peers. The information acquired during the interview was rated according to a standardized coding scheme to produce the following variables: *gets on with mother* measured how easy the young adult found getting on with the mother, ranging from 1 (very easy) to 4 (difficult); *comfortable with mother* measured how comfortable the young adult felt with the mother, ranging from 1 (comfortable) to 5 (very uncomfortable); *mother's affection* measured how much the young adult felt the mother showed that she loved him or her, ranging from 1 (none or very little affection) to 4 (a great deal) and *mother's criticism* measured the extent to which the mother openly criticized, or verbally or physically rejected, the young adult, ranging from 1 (none or very little) to 4 (a great deal). The following variables evaluated the quality of relationships with peers: *confidence in peer relationships* assessed the extent to which the young adult felt confident in making and sustaining friendships with peers, ranging from 1 (not at all confident) to 4 (very confident) and *reliance on peers* assessed the amount of trust the young adult had in his or her peers, ranging from 1 (would never rely on friends for anything) to 4 (regularly relies on friends if necessary). In addition, *romantic relationships* was rated as 1 (no dating) or 2 (dating). For those who had been involved in dating, information was obtained on partners' gender. Information was also obtained by interview on *alcohol use* rated as 1 (not problematic) or 2 (problematic, drunkenness with moderate or serious consequences) and *cannabis use* rated as 1 (none or tried once) or 2 (occasional or regular use). In the previous phase of the study by the same research team, inter-rater reliabilities ranged from correlations of 0.50–0.87 (Golombok et al., 2002).

In addition to the interview, young adults completed the Inventory of Peer and Parent Attachment (IPPA) (Armsden and Greenberg, 1987), a questionnaire measure that assessed attachment to the mother. The *total attachment score* was used as an indicator of warmth between the mother and the child, derived from the three subscales of degree of mutual trust, quality of communication and extent of anger and alienation between the young adult and the parent. The young adults also completed the SCL-90-R, a multidimensional self-report inventory designed to assess psychological disorder (Derogatis, 1994). Scores were obtained for the following subscales: *interpersonal sensitivity*, feelings of inadequacy and inferiority; *depression*, symptoms of clinical depression; *anxiety*, feelings of nervousness, tension and trembling and *hostility*, thoughts, feelings and actions of anger. The Harter Self-Perception Profile for College Students (Neemann and Harter, 1986), a measure of self-esteem, was also administered to the young adults. The measure comprises 13 subscales of which the following 9 were used: *global self-worth*, *job competence*, *scholastic competence*, *social acceptance*, *appearance*, *close friendships*, *romantic relationships*, *intellectual ability* and *sense of humour*.

Results

The parenting variables from the mothers' interviews and questionnaires were separated into two categories, warmth and control. The data were analysed according to these two constructs using multivariate analyses of covariance (MANCOVAs) with age of young adult, age of mother and the presence of siblings as covariates. Where a significant group difference was found, contrast analyses were carried out to determine whether the female-headed families (solo mother and lesbian mother families) differed from the traditional families, and whether the solo mother and lesbian mother families differed from each other. Regarding the data obtained from the young adults, the interview and questionnaire variables were also analysed using MANCOVAs with age of young adult as a covariate, followed by contrast analyses where significant group differences were found.

Mothers' interview and questionnaires

The following warmth variables (expressed warmth, sensitive responding, emotional involvement, anxiety about distancing and comfort with secure base role) were entered into a MANCOVA. Wilks's λ was significant, $F(10, 128) = 3.32$, $P < 0.01$, indicating an overall difference between family types. Contrast analyses showed that female-headed families differed from traditional families in emotional involvement ($P < 0.001$), with mothers in female-headed families showing higher levels of emotional involvement with the young adult than mothers in traditional families. There was no difference in level of emotional involvement between the solo mothers and the lesbian mothers. Regarding the PASAS, in comparison to the mothers from traditional families, solo and lesbian mothers showed significantly lower levels of anxiety about adolescent distancing ($P < 0.05$), again with no difference between these two family types. No differences were identified between any of the family types for expressed warmth, sensitive responding or comfort with their secure base role (see Table II).

The following control variables (supervision, control, severity of disputes, disciplinary indulgence, dissatisfaction with the adolescent's behaviour and conflict interaction) were entered into a MANCOVA (see Table II). Wilks's λ was significant, $F(12, 120) = 2.94$, $P < 0.01$, indicating an overall difference between the family types. Contrast analyses showed the solo mothers to differ significantly from the lesbian mothers in disciplinary indulgence ($P < 0.01$), with the solo mothers showing less disciplinary indulgence than the lesbian mothers. The solo mothers and lesbian mothers also differed significantly from each other in severity of disputes ($P < 0.01$), with solo mothers experiencing less severe disputes with their young adult children than lesbian mothers. With respect to the CBQ, the difference between the solo and lesbian mothers for the parent-adolescent conflict interaction subscale reached significance ($P = 0.05$), again reflecting less conflict in solo mother than lesbian mother families. There were no differences between any of the family types for supervision, control or the dissatisfaction with the adolescent's behaviour subscale of the CBQ.

Young adults' interview and questionnaires

The following variables relating to the young adult's relationship with the mother (*gets on with mother*, *comfortable with mother*,

Table II Means, standard deviations (SD), *F*-values and *P*-values for mother's parent-child relationship measures by family type

	Solo mother (S)		Lesbian mother (L)		Traditional (T)		Contrasts	
	Mean	SD	Mean	SD	Mean	SD	S/L versus T	S versus L
Maternal warmth								
Expressed warmth	5.08	0.65	5.22	0.87	4.78	0.90	ns	ns
Sensitive responding	4.08	0.65	4.22	0.80	3.75	0.80	ns	ns
Emotional involvement	3.75	0.53	3.50	0.61	2.66	0.78	$P < 0.001$	ns
Anxiety about distancing	46.17	8.93	45.22	9.93	52.44	9.95	$P < 0.05$	ns
Comfort with secure base role	54.63	5.54	53.78	7.00	59.28	7.07	ns	ns
Maternal control								
Supervision	3.90	0.62	3.56	0.69	3.68	0.54	ns	ns
Control	3.71	0.71	3.58	0.69	3.58	0.67	ns	ns
Severity of disputes	1.24	0.53	1.79	0.63	1.68	0.65	ns	$P < 0.01$
Disciplinary indulgence	3.33	0.65	4.00	0.47	3.52	0.57	ns	$P < 0.01$
Dissatisfaction with behaviour	1.71	2.72	2.84	4.10	4.10	4.82	ns	ns
Conflict interaction	1.14	0.91	2.42	2.71	1.87	2.64	ns	$P = 0.05$

mother's warmth and criticism of mother) were entered into a MANCOVA. As shown in Table III, no difference between family types was found. Neither was there a difference between family types for the total attachment score of the IPPA. Similarly, there was no difference between family types with respect to quality of relationships with peers (confiding to peers and reliance on peers). However, a significant difference between family types was found for romantic relationships, with a higher proportion of young adults from solo mother families (95%) and lesbian mother families (88%) than from traditional families (56%) involved in dating, $X^2(2) = 11.16$, $P < 0.01$. With the exception of one young woman from a lesbian family who identified as bisexual and had dated men and women, all of the young adults had dated the opposite sex.

With respect to psychological problems, the following variables from the SCL-90-R were entered into a MANCOVA (interpersonal sensitivity, depression, anxiety and hostility). Wilks's λ approached significance, $F(6, 122) = 1.67$, $P = 0.10$, indicating a non-significant trend towards a difference between family types. As shown in Table II, contrast analyses revealed that the young adults from female-headed families obtained lower scores than young adults from traditional families on the depression ($P < 0.05$), anxiety ($P < 0.05$) and hostility ($P < 0.01$) subscales of the SCL-90-R, with no difference between young adults from solo mother and lesbian mother families for any of these subscales. A difference in the use of alcohol, $X^2(2) = 7.25$, $P < 0.05$, but not cannabis, was identified between family types, reflecting less problem drinking by young adults from solo mother families (5%) and lesbian mother families (0%) than by their peers from traditional families (25%). The eight subscale scores of the Self-Perception Profile for College Students were also entered into a MANCOVA. Wilks's λ was significant, $F(18, 108) = 4.44$, $P < 0.001$, showing a difference between family types. Contrast analyses revealed that young adults in female-headed families differed from those in traditional families in global self-worth ($P < 0.001$), scholastic

competence ($P < 0.001$), romantic relationships ($P < 0.05$) and sense of humour ($P < 0.01$). All of these differences reflected more positive scores among the young adults from female-headed families. The only difference to emerge between young adults from solo mother and lesbian mother families was greater humour among those with solo mothers ($P < 0.01$).

Discussion

The findings of this study show that children raised by solo heterosexual mothers or lesbian mothers from infancy continue to function well as they enter adulthood. The female-headed families were found to be similar to a comparison group of traditional families on a range of measures of quality of parenting and young adults' psychological adjustment, with the scores on these measures reflecting positive family relationships and high levels of psychological wellbeing. The differences that were identified between family types indicated that mothers from mother-headed households were more emotionally involved with their young adult children than were mothers from traditional families, a finding that did not appear to be related to fewer siblings in the family home. The lower levels of separation anxiety shown by the solo and lesbian mothers may stem from these mothers' ongoing involvement with the young adults or may reflect the older age of their children and the fact that the majority had already left home whereas this had not yet happened in most of the traditional families.

Regarding conflict between mothers and their young adult children, the solo mother families were characterized by low levels of conflict and low levels of disciplinary indulgence in comparison with the lesbian mother families. This suggests that the solo mothers were stricter with their young adult offspring and that this disciplinary approach resulted in lower levels of mother-child conflict. However, the alternative explanation, that the young adults from

Table III Means, standard deviations (SD), *F*-values and *P*-values for young adult's parent-child relationship and psychological wellbeing measures by family type

	Solo mother		Lesbian mother		Traditional		Contrasts	
	Mean	SD	Mean	SD	Mean	SD	S/L versus T	S versus L
Relationship with mother								
Gets on with mother	1.22	0.54	1.44	0.62	1.47	0.71	ns	ns
Comfortable with mother	1.11	0.32	1.25	0.44	1.19	0.39	ns	ns
Mother's warmth	3.83	0.38	3.50	0.73	3.38	0.79	ns	ns
Criticism of mother	1.28	0.46	1.31	0.60	1.69	1.03	ns	ns
IPPA								
Total attachment score	108	13.30	109	8.12	101.7	15.70	ns	ns
Peer relationships								
Confiding in peers	3.61	0.60	3.81	0.40	3.31	0.78	ns	ns
Reliance on peers	3.50	0.61	3.75	0.44	3.34	0.78	ns	ns
Psychological problems								
Interpersonal sensitivity	3.25	3.47	6.24	5.62	8.29	7.51	ns	ns
Depression	6.10	4.55	7.06	5.50	11.35	9.87	$P < 0.05$	ns
Anxiety	2.00	2.63	3.24	2.77	6.97	9.17	$P < 0.05$	ns
Hostility	1.55	1.46	2.53	3.06	5.26	5.50	$P < 0.01$	ns
Self-perception profile								
Global self-worth	20.39	2.72	19.12	3.63	14.68	3.55	$P < 0.001$	ns
Job competence	12.67	1.97	12.00	2.17	11.74	2.68	ns	ns
Scholastic competence	11.61	2.20	12.06	2.81	8.65	1.87	$P < 0.001$	ns
Social acceptance	12.83	1.85	12.65	2.54	12.61	2.72	ns	ns
Appearance	12.17	2.55	11.18	3.00	10.87	3.06	ns	ns
Close friendships	12.78	1.76	13.47	1.66	13.23	3.21	ns	ns
Intellectual ability	13.22	1.73	12.24	2.77	13.26	2.50	ns	ns
Romantic relationships	11.94	3.26	11.12	3.40	9.00	3.01	$P < 0.05$	ns
Humour	13.11	1.77	10.29	2.93	13.55	2.63	$P < 0.01$	$P < 0.01$
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	χ^2	<i>P</i>
Romantic relationships								
Dating	18	95	14	88	18	56	11.16	< 0.01
Alcohol and cannabis								
Problem drinking	1	5	0	0	8	25	7.25	< 0.05
Cannabis use	7	37	4	25	15	48	2.49	ns

solo mother families were less challenging in their behaviour, cannot be ruled out. The young adults' perceptions of the quality of their relationship with their mother did not differ according to family type, with their scores on variables such as mother's affection and criticism reflecting positive mother-child relationships. Neither did they differ with respect to the quality of their relationships with peers which again appeared to be good.

The higher proportion of young adults from female-headed homes who had started dating most probably again reflects their older age. Of particular interest is the finding that all but one young adult with a lesbian mother—a young bisexual woman—identified as heterosexual. This finding is important as it contradicts the assumption that children raised in lesbian families will grow up to be lesbian or gay themselves, and challenges theoretical perspectives that consider parents to be

influential in the sexual identity development of their children. Although attitudes towards homosexuality have become more accepting in recent years, as demonstrated by the introduction of same-sex marriage and civil partnerships, an outstanding concern by policy-makers and legislators is that lesbian mothers will have lesbian and gay children, an outcome that is considered by some to be undesirable as illustrated in the tabloid press. Irrespective of opinion on this matter, the present study shows that this is not the case. Not only do the findings replicate an earlier longitudinal study of the sexual orientation of adults raised from childhood in lesbian mother families (Golombok and Tasker, 1996) but also they confirm these findings with young adults reared in lesbian families from birth.

Regarding the psychological wellbeing of the young adults, those from female-headed households showed lower levels of anxiety,

depression, hostility and problematic alcohol use than their counterparts from traditional families, and higher levels of self-esteem, indicating more positive psychological adjustment among young adults who had grown up in solo and lesbian mother homes, with no difference between the two. This finding is in direct contrast to the more negative psychological outcomes associated with single-mother families following parental separation or divorce, and highlights the diversity among female-headed families and the importance of not treating them as the same.

This longitudinal study of the development of children in mother-headed families from infancy has allowed an investigation of the effects of growing up in a female-headed family without the confounding effects of factors associated with parental separation or divorce. The findings as the children enter adulthood are in line with earlier phases of the study (Golombok et al., 1997; MacCallum and Golombok, 2004) and with previous studies of younger children raised by solo mothers (Weinraub et al., 2002) or lesbian mothers (Flaks et al., 1995; Erewaeyes et al., 1997; Chan et al., 1998; Bos, 2004) from birth. As well as providing systematic data on the outcomes for parenting and child development, the findings increase theoretical understanding more generally of the relative importance for children's psychological wellbeing of family process and family structure, and lend weight to the view that the quality of family relationships matters more than the way in which a family is formed (Golombok, 2000). The findings do not lead to the conclusion that fathers are unimportant for children's psychological wellbeing. In fact, there is much evidence to the contrary (e.g. Lamb, in press). However, it does appear that children can thrive in a variety of family constellations and that the presence of a father in the home is not necessary for children to function well. Although not all of the children in solo and lesbian mother families in the present study were conceived by donor insemination, the findings are of relevance to the Human Fertilisation and Embryology (2008) Act, as they shed light on the long-term outcomes for children raised in mother-headed families from the start.

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