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#### Abstract

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Comparing mothers' and fathers' reports on the non-resident father's contact with his children

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#### Abstract

: Analyses of contact frequency between non-resident fathers and children are often based on samples of non-resident fathers or resident mothers only. It is well established that non-resident fathers tend to report more contact than the resident mothers do, but it is less clear whether it matters which parent we ask when the aim is to explore predictors of father-child contact. Based on a high-quality Norwegian survey of ex-couples of parents living apart we find that the amount of monthly father-child contact, measured by overnight stays and visitation days, is largely associated with the same independent variables whether we use the non-resident fathers' or the resident mothers' answers, but some differences do appear. We observe more significant associations between father-child contact days and the independent variables based on the resident mothers' than the non-resident fathers' reporting. The mother's educational attainment and whether the father has children with more former partners have significant effects in the subsample of resident mothers but not in the subsample of non-resident fathers. We argue that future surveys should collect information from both parents. Using information from one parent only should be a last resort if more adequate data cannot be obtained.


Keywords: Absent fathers, discrepancy between mother's and father's reporting, father-child contact, fathers' role after separation, parents living apart

JEL classification: J12, J13.
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## Sammendrag

Undersøkelser som kartlegger samvær mellom foreldre og barn som ikke bor sammen til daglig, omfatter av og til kun samværsforeldrene eller kun bostedsforeldrene. Samværsforeldre oppgir gjerne at de er mer sammen med barna enn hva bostedsforeldrene oppgir. I dette paperet undersøker vi om det spiller noen rolle hvem av foreldrene vi spør når målet er å undersøke hvilke faktorer som fremmer og hemmer mye kontakt mellom samværsfedre og barn.

Vi benytter data fra Undersøkelsen om samvær og bidrag 2004. Denne hadde et utvalg av foreldre med felles barn under 18 år, men som ikke bodde sammen. Analysene i dette pareret er basert på et underutvalg av samværsfedre og bostedsmødre som tidligere har vært gift eller samboere. Vi har dermed opplysninger fra mor og far til samme barn. Data ble innhentet gjennom et telefonintervju eller postalt skjema, og registeropplysninger om partenes utdanning, inntekt og en del andre forhold ble koblet til.

Vi benytter to mål for samvær mellom samværsfedre og barn, nemlig antall overnattinger og antall besøksdager på månedlig basis. Samværsfedrene oppgir i gjennomsnitt mer samvær enn bostedsmødre, men i en liten minoritet av par rapporterer mor mer kontakt enn far. Multivariate analyser av hvilke faktorer som har betydning for mengden samvær mellom far og barn, gir langt på vei samme resultater enten vi baserer oss på mors eller fars svar. Det er imidlertid også visse forskjeller. Både for antall overnattinger og antall samværsdager finner vi flere signifikante sammenhenger når vi benytter mors enn fars svar. Det er en signifikant positiv sammenheng mellom mors utdanningsnivå og antall samværsdager mellom far og barn i analyser av mors svar, men ikke i analyser av fars svar. Videre er det en negativ effekt av antall tidligere partnere som far har barn med i de førstnevnte, men ikke i de sistnevnte analysene. Samtlige forklaringsvariabler i analysene er basert på registerdata. Dermed er det utelukket at forskjeller i analyser basert på mors og fars svar skyldes ulik rapportering av f. eks. partenes utdanning eller inntekt.

Selv utvalg av bostedsmødre og samværsfedre til samme barn gir altså noe forskjellige konklusjoner med hensyn til hvilke faktorer som har betydning for mengden samvær mellom far og barn avhengig av om vi baserer oss på mors eller fars svar. Framtidige undersøkelser og analyser av foreldre som bor hver for seg bør derfor omfatte både fedre og mødre. Informasjon fra kun den ene parten bør kun benyttes når mer adekvate data ikke er tilgjengelige.

## 1. Introduction

With an increasing number of parents living apart, there is a great need for research on the parents' childcare arrangements and on non-resident parents' involvement with their children. Several studies have been conducted in order to assess the frequency of contact between non-resident parents and child(ren), as well as to trace the predictors of high or low levels of contact (for instance, Seltzer and Bianchi, 1988; Seltzer, 1991, 1998; Cooksey and Craig, 1998; Manning and Smock, 1999; Coley and Morris, 2002; Manning et al., 2003; Kitterød, 2005, 2006b, 2007; Cashmore et al., 2008; Mikelson, 2008; Amato et al., 2009, Juby et al., 2011). Some studies are based on information given by the nonresident parents themselves (for instance Kruk, 1991; Cooksey and Craig, 1998; Manning and Smock, 1999 and 2000; Leite and McKenry, 2002; Manning et al., 2003; Skevik, 2006), whereas others use information from the resident parents (for instance Seltzer, 1991 and 1998; Stephens, 1996; Carlson et al., 2008; Berger et al., 2012; McGene and King, 2012). Most researchers would probably prefer to have information from both parents, but such data are scarce so that they often have to be content with a sample of either resident or non-resident parents.

It is widely recognized that non-resident fathers tend to depict themselves as more actively involved with their children than the resident mothers do (for instance Seltzer and Brandreth, 1994). Hence, analyses using data from non-resident fathers generally show more father-child contact than those using data from resident mothers. However, it is less clear whether it matters which parent we ask when the aim is to explore the predictors of high or low father-child contact. While some analyses suggest different results in studies based on the non-resident fathers' answers and the resident mothers' answers (for instance Coley and Morris, 2002; Mikelson, 2008) others identify the same predictors of father-child contact in analyses based on a sample of non-resident fathers and analyses based on a sample of resident mothers (Seltzer and Brandreth, 1994).

Since few studies include information from both non-resident and resident parents and analyses are often based on information from one of the partners only, it is important to assess whether it actually does matter which partner we ask when the aim is to identify factors that promote or hinder fatherchild contact. However, it is difficult to compare results across surveys since they often use different contact measures. Whereas some researchers use the number of nights the child spend with the nonresident parent during a certain period (one year or one month) (Cashmore et al., 2008; King et al., 2004), most include all face-to-face contacts, irrespective of whether the child stays over-night or not (for example Amato et al., 2009). Some also include other types of contact, such as telephone calls,
letters, e-mail, sms etc. The independent variables (for instance the partners' education and income) may also be defined differently across surveys.

This paper contributes to the research on whether the predictors of father-child contact differ depending on which parent we ask, by comparing results based on the answers from the non-resident father and the resident mother in a high-quality Norwegian survey from 2004 of parents living apart, to which a lot of register data has been added. ${ }^{1}$ We use a sub-sample of previous couples of resident and non-resident parents who both report on the non-resident parent's contact with their common children, and look at two measures of contact frequency, namely the number of contact days and the number of overnight stays per month. Moreover, we include only independent variables taken from register data in order to eliminate any differences in results that may stem from divergent reporting on independent variables, such as for instance each partner's income and educational attainment.

With its high gender-equality ambitions and active gender-equality policies we believe that Norway provides an interesting case in this context. Fathers are encouraged to be actively involved with their children both during marriage/cohabitation and following a divorce or a union dissolution, and parents living apart are urged by the authorities to make explicit agreements on visitation arrangements. It is therefore important to identify factors that deter or encourage contact between children and nonresident parents, and to know whether this can be done on the basis of surveys from one of the parents only, if surveys covering both parents are not available.

If it turns out that it does not matter which parent we ask when the aim is to identify predictors of father-child contact, we may have greater trust in studies based on information from one partner only. However, if analyses based on the mothers' and the father's answers provide different results, reports from both parents should be strongly advised in future studies. Moreover, if the conclusions differ depending on whether father-child contact is measured by number of contact days or number of overnight stays, this would be an argument for including both measures in studies in the field.

## 2. Previous research

Researchers almost unanimously find that non-resident fathers report more father-child contact than do resident mothers (Braver et al., 1991; Seltzer and Brandreth, 1994; Jensen and Clausen, 1997; Amato et al., 2009). Jensen and Clausen (1997) argue that at least in the Norwegian context, this discrepancy

[^1]may result from a lower response rate from non-resident fathers than from resident mothers. Nonresponding fathers tend to have less socio-economic resources (education, income etc.) than those who do respond, and fathers with less socio-economic resources have a smaller amount of contact with their children than those with more resources. Hence, the higher contact frequency reported by nonresident fathers than by resident mothers may be due to selective non-response among the non-resident fathers. However, Kitterød (2004) demonstrates that also non-resident fathers and resident mothers of the same child(ren) disagree on the amount of father-child contact.

As we do not know the actual amount of contact between non-resident fathers and children, we cannot tell whether the discrepancy between the parents' reporting stems from overestimation from the nonresident father and / or underestimation from resident mothers. Showing significant disagreements between the partners' reporting on father involvement in household work also in married and cohabiting couples, Kamo (2000) lists four possible explanations for the partners' over- or underestimation of household chores, namely (1) social desirability, (2) resentment of performing household work, (3) knowledge of the spouse's behaviour and (4) efficiency in doing household work. We believe that the first and third factors may be particularly relevant for parents living apart, too. ${ }^{2}$

Social desirability is known to be a major source of response bias (Smith et al., 1998; Kamo, 2000). Non-resident fathers may overestimate their contact with children because they want to appear "politically correct", and resident mothers may over-report the amount of father-child contact for the same reason. Over-reporting father-child contact may thus be particularly prevalent among parents with high gender-equality ambitions, such as the highly educated. Qualitative research suggests that both partners sometimes overestimate the husband's contribution and underestimate that of the wife in order to maintain a myth about equal sharing, and that this is particularly common for those believing in gender equality (Hochschild, 1989; Thagaard, 1996; Bittmann, 1999). Kamo (2000) reports results that indicate that husbands with egalitarian gender role attitudes tended to attribute more housework hours to themselves than their wives did, while wives with more egalitarian attitudes gave more credit to their husbands. As for Norway, Haavind (1984) argues that women often portray the couple's housework sharing as more equal than it actually is, so as to conform to the perceived prescriptions of gender equality. She talks about "women's new burden" in order to describe women's efforts to depict their partners as more involved with family work than they really are. Syltevik (2000a) finds that

[^2]fathers in Norway have also become more eager to describe themselves as involved parents and equal sharers, and suggests that we may now even talk of "men's new burden".

Hochschild (1989) and Rubin (1994) argue that some men may also underestimate their contribution to household work in order to preserve their self image as main breadwinners. However, even fathers with rather traditional family values are probably less likely to underreport their contact with nonresident children, particularly in a country like Norway with strong expectations of father involvement with children. The exception might be fathers who feel that their ex-partner hinders their contact with the children. All things considered, we do not really know what to expect regarding differences between groups of parents in over- and underreporting on father-child contact among parents living apart in Norway.

The resident parent's knowledge of the former partner's behaviour may also be an important factor regarding disagreements between parents' reporting of father-child visitation. The resident mother might not be aware of all the contact that occurs, particularly when it comes to occasional day-time visits to a father living near by. Assuming that the mother is better informed about the children's overnight stays, we expect less discrepancy between the non-resident father's and the resident mother's reports on the number of nights than the number of days the non-resident father and the child have spent together. Syltevik (2000b) argues that at least in the Norwegian context, highly educated parents negotiate the division of family work more openly than less educated parents. If this is also the case for parents' living apart, we would expect highly educated mothers to be better informed about father-child contacts than less educated mothers.

Whereas researchers unanimously find that non-resident fathers on the average report more father-child contact than resident mothers do, the picture is less clear as to whether the predictors of father-child contact differ in studies based on the father's and the mother's reporting. Using the resident mothers' reports, Seltzer (1998, see table 4) found that contact frequency was correlated neither with the mother's education, nor with the father's education. Using the fathers' reports, Cooksey and Craig (1998) found that highly educated non-resident fathers were more likely to maintain frequent contact with their children than the less educated. However, although both studies use data from the second wave of the National Survey of Families and Households (NSFH), the samples are differently delimited. Cooksey and Craig's sample comprised 719 children and their fathers, while Seltzer's sample comprised 161 earlier married or cohabiting couples. Besides, the independent variables were differently defined.

Therefore, we do not know if the diverging results stem from different sources of information (the nonresident father or the resident mother) or from other dissimilarities between the two studies.

Seltzer and Brandreth (1994) compared American parents' reports of non-resident parents' contact with their children based on one sample of 1500 resident mothers and another sample of 480 nonresident fathers. They found that when both samples were restricted to parents with children born in a first marriage, resident mothers and non-resident fathers were similar on a variety of demographic characteristics, including racial composition, family size, and duration of separation. In this restricted sample, resident mothers and non-resident fathers reported more similar levels of paternal involvement after divorce, measured as a combination of contacts and child support payment, compared to the unrestricted samples, although fathers still reported greater involvement than mothers. Whether the respondent was the father or the mother did not affect the factors predicting visitation-frequency between non-resident fathers and children.

There are also analyses based on reports from both parents in the same relationship, like we have in our data. Coley and Morris (2002) examined predictors of father involvement with children and fathermother discrepancies in reporting based on a sample of 228 pairs of mothers and fathers of 2-4 year old children in low-income families living in low-income urban neighbourhoods in Boston, Chicago and San Antonio. However, only in half of the couples did the parents live apart. Father involvement was measured by an indicator including the frequency of contact between father and child, whether the father took responsibility for raising the child, whether he helped with financial support of the child, and whether his involvement aided the mother or not. Mothers consistently reported less father involvement than fathers. Moreover, larger discrepancies between fathers' and mothers' reports were predicted by parental conflict, the father's age, and the mother's education and employment.

Mikelson (2008) has criticized the above mentioned study for using the share with "exact mother and father agreement" as a measure of the agreement between the parents' answers. He examined demographic and social factors that predict the discrepancy between the parents' reports, based on a sample of 2058 pairs of parents from the American Fragile Families and Child Wellbeing Survey, which comprised parents living together ( 87 per cent) as well as parents living apart ( 13 per cent). Father involvement included both frequency of involvement and emotional involvement, measured by two different indicators. Mikelson demonstrates that one may get very different results depending on how "father-mother discrepancy" is measured. Using the percentage of total agreement between mother and father, he found, contrary to Coley and Morris (2002) that resident father-mother pairs
have greater agreement than mothers and fathers living apart. Using instead contact frequency reported by the father minus contact frequency reported by the mother as a measure of agreement, he found that parents living together have lower agreement than parents living apart. Relationship quality, marital status, and whether the mother received financial support from someone else than the father all proved to be significant predictors of father-mother discordance in reported father involvement.

Hence, earlier research is inconclusive as to whether analyses based on non-resident fathers' answers identify different predictors of father-child contact from those based on resident mothers' reports. Seltzer and Brandreth (1994) conclude that it does not matter which parent we ask, while for instance Cooley and Morris (2002) and Mikelson (2008) suggest that analyses based on the resident mothers' reports provide a somewhat different picture from those based on the non-resident fathers' reports. However, previous analyses often use samples that cannot be generalized to the whole population (Coley and Morris, 2002; Hernandez and Coley, 2007). Some are not based on samples of pairs of parents (Seltzer and Brandreth, 1994), and some include both parents living apart and parents living together (Coley and Morris, 2002; Hernandez and Coley, 2007; Mikelson, 2008).

## 3. The Norwegian context

In the present paper we explore if it matters which parent we ask when the aim is to identify predictors of contact frequency between non-resident fathers and their children in a social democratic country like Norway. The research cited above comes from the US and does not necessarily apply to the Norwegian context. The legal regulations of child maintenance payment, of the child's permanent dwelling after separation, of contact between the child and the non-resident parent as well as of tax rules and state and municipal transfers, may create different settings across countries for parents living apart. This may imply different patterns of disagreement in the partners' reporting. What is considered to be socially desirable, as well as knowledge of the other parent's behaviour and present life situation, may vary differently across groups than in the US.

As in many other Western countries, fathers are increasingly expected to take part in housework and childcare in Norway, both when the parents live together and following a separation. According to Leira (2002) the concept of the "caring father" was institutionalised in the Scandinavian countries well before it was made a political topic elsewhere. Norway was the first country in the world to implement a father's quota in the parental leave scheme with the aim of promoting fathers' involvement in their children both during the quota and beyond. When the quota was introduced in 1993, four weeks of the parental leave were reserved for the father. After several extensions, the quota is now twelve weeks.

The Norwegian time use surveys show a significant increase in coupled fathers' time spent on housework and childcare in recent decades (Kitterød, 2012). Combined with the rise in mothers' employment this has resulted in more equal parenting roles, even though in a large proportion of couples men still work more for pay than women, whereas women spend more time on family work (Kitterød and Lappegård, 2012).

Although shared residence for children has become more common when parents split up, most children still live permanently with their mother and have various types of visitation arrangements with their father. Fathers are encouraged to continue their involvement with their children when parents separate, and non-resident fathers now have more contact with their children than in the mid 1990s (Sætre, 2004). Parents living apart are obliged to share the children's travelling expenses between them in order for fathers' contact costs to be reduced, and the child maintenance payment shall be reduced the more contact there is between the non-resident parent and the child (St.meld. No 19, 2006-2007).

However, shared residence or extensive contact between the child and the non-resident father may be economically disadvantageous for the parents, and particularly for the resident mothers (St.meld. No. 29, 2002-2003). There is a quite extensive income package for lone parents in Norway, with the primary aim of securing the economic well-being of children who live with one of their parents only. The parent with whom the child lives permanently is entitled to social benefits such as a transitional benefit for a certain number of years and support for education and childcare costs, as long as she/he does not live with a new partner and the contact between the non-resident parent and the child does not exceed what is considered "normal contact" (one night every week, every second weekend, three weeks in summer and every second of the other vacations). In addition, the resident parent is entitled to additional children's allowances and a certain tax deduction.

If parents opt for shared residence or a contact pattern in excess of "normal contact", none of them qualifies for transitional benefit, support for their own education or childcare costs. The additional children's allowances may be divided between the parents, though, and each of them may have a tax deduction every second year. In spite of a normative climate for divided residence following union dissolution, parents, and particularly mothers, may hesitate to agree on such an arrangement if they lose out economically compared to being a lone parent. Compared to being a non-resident parent, however, shared residence may be economically beneficial (St.meld. No. 29, 2002-2003).

Parents who split up are obliged to see a mediator in order to agree on the childcare arrangements. This applies to both married and cohabiting couples.

## 4. Research strategy

We use two measures of contact frequency, namely the number of monthly contact days and the number of overnight stays per month. While number of visitation days is a widely used measure in studies in the field, Cashmore et al. (2008) argue that overnight stays may facilitate a closer and more enduring relationship between non-resident parents and children. They encompass the routines, everyday activities and dynamics that typically characterise family life, while daytime visits may be shorter and include less daily life activities.

We start by presenting some descriptive statistics on the agreement/disagreement between the nonresident father's and the resident mother's reporting on father-child contact. In order to answer if it matters whether we ask the resident mother or the non-resident father when the aim is to identify predictors of contact frequency between non-resident fathers and children, we run two identical multivariate OLS regressions with the number of contact nights, then days, as a dependent variable, one based on the non-resident fathers' answers, and one based on the resident mothers' answers. The models include the same independent variables (cf. Data and measurement). Formally we estimate:
(1) $V_{m}=\alpha+\beta_{1} X_{1+\ldots+} \beta_{n} X_{n}+\varepsilon$,
(2) $\mathrm{V}_{\mathrm{f}}=\alpha^{\prime}+\beta^{\prime}{ }_{1} \mathrm{X}_{1+\ldots+} \beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\varepsilon^{\prime}$
where $\mathrm{V}_{\mathrm{m}}$ are visitation nights (or days) as reported by the mother, whereas $\mathrm{V}_{\mathrm{f}}$ are visitation days as reported by the father.

By including register-based independent variables only, we make sure that disagreement on other factors than the amount of father-child contact does not influence the results. To be sure, this strategy excludes the inclusion of some possibly important predictors, such as conflict level, the partners' present civil status etc. Nevertheless, we have register information on key variables such as each partner's education and income, the number and ages of children and some other factors.

If the two models produce different results, this indicates that it actually does matter whether we rely on the fathers' or the mothers' reports in analyses of father-child contact. For instance, if there is a
significant positive relationship between the father's education and father-child contact in the model based on the fathers' answers, but not in the model based on the mothers' answers, this suggests that a sample of non-resident fathers does generate a different picture of the predictors of father-child contact from a sample of resident mothers. This is the case even though the differences between the two models may not be statistically significant. Since researchers seldom have access to answers from both parents, they have to conclude on the basis of a sample of either resident or non-resident parents.

Contrary to most other studies, we do have the opportunity to check whether the two models produce significantly different results, and we do so in a next step of the analysis. We reshape the data from a sample of couples to a sample of parents, where the non-resident father and the resident mother contribute with one observation each. Next we specify a model with interaction terms between the respondent's gender and each of the independent variables. Formally the model can be written as
(3) $V=M V_{m}+(1-M) V_{f}$
where $M=1$ when visitation nights (or days) are reported by the mother, $M=0$ when visitation nights are reported by the father. By substituting (1) and (2) into equation (3) we get

$$
\begin{aligned}
& \text { (4) } \mathrm{V}=\mathrm{M}\left(\alpha+\beta_{1} \mathrm{X}_{1}+\ldots+\beta_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\varepsilon\right)+(1-\mathrm{M})\left(\alpha^{\prime}+\beta^{\prime}{ }_{1} \mathrm{X}_{1}+\ldots+\beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\varepsilon^{\prime}\right) \\
& =\mathrm{M} \alpha+(1-\mathrm{M}) \alpha^{\prime}+\mathrm{M} \beta_{1} \mathrm{X}_{1}+(1-\mathrm{M}) \beta^{\prime}{ }_{1} \mathrm{X}_{1}+\ldots+\mathrm{M} \beta_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+(1-\mathrm{M}) \beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\mathrm{M} \varepsilon+(1-\mathrm{M}) \varepsilon^{\prime} \\
& =\alpha^{\prime}+\left(\alpha-\alpha^{\prime}\right) \mathrm{M}+\beta^{\prime}{ }_{1} \mathrm{X}_{1}+\left(\beta_{1}-\beta^{\prime}{ }_{1}\right) \mathrm{M} \mathrm{X}_{1}+\ldots+\beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\left(\beta_{\mathrm{n}}-\beta^{\prime}{ }_{\mathrm{n}}\right) \mathrm{MX} \mathrm{X}_{\mathrm{n}}+\varepsilon^{\prime}+\left(\varepsilon-\varepsilon^{\prime}\right) \mathrm{M} \\
& =\alpha^{\prime}+\overline{\mathrm{a} M+} \beta^{\prime}{ }_{1} \mathrm{X}_{1}+\mathrm{b}_{1} \mathrm{MX} \mathrm{X}_{1}+\ldots+\beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\mathrm{b}_{\mathrm{n}} \mathrm{MX} \mathrm{X}_{\mathrm{n}}+\varepsilon^{\prime}+\overline{\mathrm{e}}
\end{aligned}
$$

where $\mathrm{MX}_{1} \ldots \mathrm{MX}_{\mathrm{n}}$ are the interaction terms, $\overline{\mathrm{a}}=\alpha-\alpha^{\prime}, \mathrm{b}_{1}=\beta_{1}-\beta^{\prime}{ }_{1}, \ldots, \mathrm{~b}_{\mathrm{n}}=\beta_{\mathrm{n}}-\beta^{\prime}{ }_{\mathrm{n}}$, and $\overline{\mathrm{e}}=\varepsilon-\varepsilon^{\prime}$.

When number of visitation days are based on reports from the mothers, $M=1$, and,
(5) $\mathrm{V}=\alpha^{\prime}+\overline{\mathrm{a}}+\beta^{\prime}{ }_{1} \mathrm{X}_{1}+\mathrm{b}_{1} \mathrm{X}_{1}+\ldots+\beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\mathrm{b}_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\varepsilon^{\prime}+\overline{\mathrm{e}}=\alpha+\beta_{1} \mathrm{X}_{1}+\ldots+\beta_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\varepsilon$
where $=\alpha=\overline{\mathrm{a}}+\alpha^{\prime}, \beta_{1}=\mathrm{F}_{1}+\beta^{\prime}{ }_{1}, \ldots, \beta_{\mathrm{n}}=\mathrm{E}_{\mathrm{n}}+\beta^{\prime}{ }_{\mathrm{n}}$, and $\varepsilon=\overline{\mathrm{e}}+\varepsilon^{\prime}$.

When number of visitation days are based on reports from the fathers, $M=0$, and,
(6) $\mathrm{V}=\alpha^{\prime}+\beta^{\prime}{ }_{1} \mathrm{X}_{1}+\ldots+\beta^{\prime}{ }_{\mathrm{n}} \mathrm{X}_{\mathrm{n}}+\varepsilon^{\prime}$.

Equation (5) and (6) are thus identical with equation (1) and (2). As the $5_{1}, \ldots, 5_{n}$ are the differences between the $\beta_{1, \ldots}, \beta_{\mathrm{n}}$ and the $\beta^{\prime}{ }_{1, \ldots}, \beta^{\prime}$, the test whether the differences between the $\beta_{1, \ldots}, \beta_{\mathrm{n}}$ and the $\beta^{\prime}{ }_{1, \ldots}, \beta^{\prime}{ }_{n}$ are significantly different from zero, is whether the $\mathrm{C}_{1}, \ldots, \mathrm{D}_{\mathrm{n}}$ are significantly different from zero.

Significant interaction terms indicate that the coefficients in equation (1) differ from those in equation (2). ${ }^{3}$ However, if no significant interaction terms occur, we may still conclude that it matters which parent we ask if a significant effect is found in one of the original models, but not in the other. Researchers seldom have access to both parents' answers and have to rely on one of the parent's reporting. Two researchers, one with access to the mother's information on father-child contact only (cf. equation (1)), the other with the father's information only (cf. equation (2)), may get different results, even when the results are not sicnificantly different from each other.

## 5. Data and measurement

In the empirical analysis we use data from the survey Contact arrangements and child maintenance 2004, conducted by Statistics Norway on commission from the Ministry of Children and Gender Equality. ${ }^{45}$ The population consisted of parents with children below 18 years of age at $31^{\text {st }}$ December 2004, with both parents residing in Norway and only one parent registered living with the child. The gross sample was drawn in two stages. First, the children were identified, and then the population of parents was defined as the parents of these children. The sample consisted of two parts: (1) parents who lived with the child(ren), but not with the other parent (called resident parents), and (2) parents neither residing with the child(ren) nor with the other parent (called non-resident parents). Each nonresident parent had one or more children with a resident parent in the sample and vice versa. The registered address of the child was used to distinguish between the two groups of parents. Data were collected by telephone interviews in November and December 2004, but with a postal follow-up in early February 2005 and register data added. The youngest child in the relationship was selected as the focal child. Non-resident parents reported on their own involvement with this child, and resident parents reported on the non-resident parents' involvement.

[^3]Out of a gross sample of 3582 parents, 2692 parents were interviewed. The overall response rate was 75 percent; 79 and 71 percent among the resident and the non-resident parents, respectively. In a significant number of cases, only one of the parents participated in the interview. There were 1020 complete couples of resident and non-resident parents in the net sample. The response rate was higher among mothers than fathers, and higher among the highly educated than among the less educated. A weight was calculated in order to correct for the over-representation of certain groups in the sample (couples with many children), and for the disproportionate non-response rates in certain groups. The survey is documented in Skaare and Fodnesbergene (2005).

While the survey covered all parents living apart, we include in the analysis only those where the focal child was registered living with the mother and where the parents had ever lived together, either as formally married or in a consensual union, and where both partners responded in the survey (760 couples). 32 observations with missing data on either nights or days of contact between the nonresident father and his child were omitted, which leaves us with an analysis sample comprising 728 "ex-couples" of resident mothers and non-resident fathers.

We do not include couples where the children stayed permanently with the father and the mother was the non-resident parent, since they still constituted a small minority in 2004, and also differ in many ways from the more traditional couples of resident mothers and non-resident fathers (Kitterød, 2006a). A significant proportion of these couples actually have more or less shared residence for their children (Jensen, 2005).

## Dependent variables

We use two measures of contact frequency between non-resident fathers and children, and these constitute the dependent variables in the OLS regressions. We look at the number of monthly contact nights and the number of monthly contact days. This is the number of nights and days the non-resident father spent with his focal child in October 2004, ${ }^{6}$ as reported by the non-resident father himself and the resident mother. We use them as continuous variables in the regression analyses.

[^4]
## Independent variables

We include independent variables that are often used in research on contact patterns between nonresident fathers and children (for instance Stephens, 1996; Cooksey and Craig, 1998; Manning et al., 2003; Skevik, 2006). They capture the parents' socioeconomic resources (income and education), characteristics of their common children and whether the parents had children with more than one former partner, and are all based on register information linked to the survey data. The same independent variables are included in models based on the non-resident fathers' reports and those based on the resident mothers' reports.

We use the following variables:

- The resident mother's and the non-resident father's disposable (net) income. This includes wages and salaries, net income from self-employment, various pensions and social security benefits, including child related benefits, and net capital income. We use income quintiles in the analysis. Respondents are ranked by the size of the mother's/father's income and divided into quintiles, where the first one comprises those with the lowest income. We use the third quintile as reference. The quintile limits differ for the mothers and the fathers since fathers usually have higher incomes (see tables 4 and 5 .
- The resident mother's and the non-resident father's educational attainment. This is defined as the highest level completed at the time of the survey and measured as accumulated standard number of years it takes to attain a certain level. We distinguish between (1) High school or less, (3) University 1-4 years, i.e. up to and including a bachelor degree and (4) University 5 years or more, i.e. a master degree or more.
- Number of common children (with 1 child as reference)
- Age of the focal child (the youngest common child of the parents) (with 0-5 years as reference)
- Sex of the focal child (with girls as reference)
- Number of the non-resident father's previous relationships which included children and Number of the resident mother's previous relationships which included children (with 0 as reference category). This tells whether the parents have children with more than one ex-partner.
- Whether information from both parents was given in 2004 or not (reference: both interviewed in 2004). In some cases one of the parents was interviewed by telephone in November/December 2004 and the other answered a postal questionnaire in early February 2005, as part of a follow-up procedure. In these couples, discrepancies between the partners' answers may be due to this time lag, because it may be difficult to remember exactly the number of overnight stays and daytime visits in October for respondents who filled in the questionnaire in February. We constructed a dichotomous variable capturing whether both partners answered the survey in 2004 or not, in order to control for this.


## 6. Results

## Descriptive statistics

We start by presenting descriptive statistics on the disagreement between the partners' reporting on contact frequency between non-resident parents and children. Assuming that the resident mothers may have more knowledge about overnight stays than daytime visits, we expect less disagreement between the partners' reporting on the number of overnight stays.

Table 1. Number of monthly visitation nights and days for non-resident fathers and children, as reported by the non-resident father and the resident mother. $\mathbf{N}=728$. Percentage and average

|  | Nights |  | Days |  |
| :--- | ---: | ---: | ---: | ---: |
| Number | Mother's <br> report | Father's <br> report | Mother's <br> report | Father's <br> report |
| 0 | 25 | 17 | 19 | 14 |
| $1-4$ | 13 | 6 | 13 | 5 |
| $5-8$ | 35 | 33 | 31 | 25 |
| $9-12$ | 18 | 28 | 27 | 35 |
| $12+$ | 9 | 15 | 10 | 22 |
| All | 100 | 100 | 100 | 100 |
| Average |  |  |  |  |

According to the non-resident fathers themselves, they spent an average of 6.9 nights with their children in October 2004, while according to the resident mothers, the number of overnight stays was only 5 (table 1). Fewer fathers than mothers reported zero overnight stays, while more reported at least nine overnight stays. Looking at contact days, we see very much the same pattern, although in average both groups report that the father spends more days than nights with his children. In absolute terms, the difference between the parents' reporting is more extensive for contact days than for overnight
stays, but in relative terms, the difference is about the same. Both for nights and days, the non-resident fathers report on the average approximately 40 percent more contact than the resident mothers do. ${ }^{7}$

When cross-tabulating the non-resident father's and the resident mother's reports on father-child contact frequency (tables 2 and 3), we find that the discrepancy between the two partners' answers is even greater than what is shown in table 1 . While the father reports most contact in a significant proportion of couples, there are also couples where the mother reports more father-child contact than the father himself does. For instance, in 4 percent of the couples, the non-resident father reported that the child spent 5-8 nights with him in October 2004, whereas the resident mothers reported 9-12 contact nights (table 2 ).

Table 2. Number of monthly visitation nights with non-resident father, as reported by the non-resident father and the resident mother. Cross tabulation. N=728. Percentage of grand total

| Number of nights <br> reported by the father | Number of nights reported by mother |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 0 nights | $1-4$ nights | $5-8$ nights | $9-12$ nights | $13+$ nights | All |
| 0 nights | 16 | 0 | 1 | 0 | - | 17 |
| $1-4$ nights | 2 | 2 | 2 | 1 | - | 6 |
| $5-8$ nights | 4 | 7 | 18 | 4 | 0 | 33 |
| $9-12$ nights | 1 | 3 | 13 | 11 | 1 | 28 |
| $12+$ nights | 1 | 1 | 2 | 3 | 8 | 15 |
| All | 25 | 13 | 35 | 18 | 9 | 100 |

Table 3. Number of monthly visitation days with non-resident father, as reported by the nonresident father and the resident mother. Cross tabulation. N=728. Percentage of grand total

| Number of days <br> reported by the father | Number of days reported by mother |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 0 days | $1-4$ days | $5-8$ days | $9-12$ days | $13+$ days | All |
| 0 days | 13 | 1 | 0 | - | - | 14 |
| 1-4 days | 2 | 1 | 1 | 0 | - | 5 |
| 5-8 days | 3 | 6 | 14 | 2 | 0 | 25 |
| 9-12 days | 1 | 4 | 12 | 17 | 1 | 34 |
| 12+ days | 1 | 0 | 4 | 8 | 9 | 22 |
| All | 19 | 13 | 31 | 27 | 10 | 100 |

Both for overnight stays and contact days, a great number of couples report approximately the same amount of father child-contact. This is supported by the high correlation coefficients between the two partners' reporting on both contact measures. Pearson's correlation coefficient is 0.71 and 0.67 for

[^5]overnight stays and number of contact days, respectively. This does support our assumption that parents agree more on overnights stays than on daytime visits because of the mother's greater knowledge of the former. The difference is small though. Disagreements in reporting may also stem from differences in social desirability and other factors.

## Regression results

We now proceed to our main research question on whether it matters which parent we ask when the aim is to identify possible predictors of father-child contact. We run identical multivariate regression models based on the non-resident fathers' and the resident mothers' answers as specified in equation (1) and (2) (tables 4 and 5). The first two columns present results (regression coefficients and $t$-values) based on the fathers' reports of contact nights (or days), and columns three and four present results based on the mothers' reports.

Multivariate regressions on the number of nights the non-resident father spends with his child reveal almost the same results irrespective of which parents' reporting we use. According to both models, fathers with high income spend more nights with the children than fathers with low income, fathers with two children spend more nights with the children than those with only one child, the number of contact nights decreases with the age of the child, ${ }^{8}$ and fathers who have children with more than one former partner, have less contact with the focal child than fathers who have children with only one former partner (the child's mother). The explained variance is also fairly similar in the two models ( $\mathrm{R}^{2}=0.15$ and 0.17).

When it comes to the mother's education, however, we find slightly different results in models based on the fathers' and the mothers' reporting. Based on the mothers' reporting, the non-resident fathers spend on the average three more nights per month when the mother has a long university education compared to when she has high-school education, and 0.78 nights more when she has a short university education compared to when she has high-school education. Both differences are statistically significant at the 5 per cent level. Based on the non-resident fathers' reporting, they spend on the average two more nights with children when the mother has a long university education, compared to when she has a high school education, and the coefficient is statistically significant at the 10 per cent level only. There is no significant effect of the mother having a short university education. As for the sex of the child, we find a marginally significant (10-percent level) association with visitation frequency based on the fathers'

[^6]reports, so that fathers spend somewhat less time with boys than with girls. This association is not discernible in the analysis based on the mothers' reports, although the coefficient has the same sign.

Even though the analysis based on the non-resident fathers' reports by and large yield similar results to that based on resident mothers' reports, researchers would draw slightly different conclusions regarding associations with the mother's education and the sex of the child, from a survey comprising non-resident fathers only and a survey comprising resident mothers only.

Table 4. Results from ordinary least square regression of the number of monthly visitation nights with non-resident father. Fathers' and mothers' reports. $\mathrm{N}=728{ }^{1}$

|  | Father's report |  | Mother's report |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Regression coefficients | $\begin{array}{r} \mathrm{T}- \\ \text { values } \end{array}$ | Regression coefficients | $\begin{array}{r} \mathrm{T}- \\ \text { values } \end{array}$ |
| Intercept | 8.58 | 11.68 | 6.54 | 9.95 |
| Mother's net income (ref=3. quintile, 233 000-265 999 NOK) |  |  |  |  |
| 1. quintile (less than 193000 NOK ) | -. 87 | -1.45 | -. 28 | -. 51 |
| 2. quintile (193000-232999 NOK) | . 69 | 1.14 | . 07 | . 13 |
| 4. quintile (266000-298999 NOK) | . 08 | . 15 | -. 47 | -. 94 |
| 5. quintile (299000 NOK + ) | -. 05 | -. 10 | -. 65 | -1.32 |
| Father's net income (ref=3. quintile, 228 000-266 999 NOK) |  |  |  |  |
| 1. quintile (less than 174000 NOK ) | -1.78 | -3.14 | -1.54 | -3.03 |
| 2. quantile (174000-227999 NOK) | -. 50 | -. 91 | -. 29 | -. 60 |
| 4. quintile (267000-333999 NOK) | . 90 | 1.55 | . 99 | 1.91 |
| 5. quintile (334000 NOK + ) | 1.47 | 2.55 | 1.20 | 2.31 |
| Mother's education (ref=high school or below) |  |  |  |  |
| University 1-4 years | . 62 | 1.41 | . 78 | 1.97 |
| University 5 years + | 2.04 | 1.92 | 3.14 | 3.31 |
| Father's education (ref=high school or below) |  |  |  |  |
| University 1-4 years | . 48 | . 93 | . 60 | 1.30 |
| Univrsity 5 years + | -. 11 | -. 14 | -. 34 | -. 48 |
| Number of children in relationship (ref=one child) |  |  |  |  |
| Two children | 1.04 | 2.58 | 1.39 | 3.86 |
| Three children + | -. 47 | -. 76 | . 08 | . 14 |
| Age of focal child (ref=0-5 years) |  |  |  |  |
| 6-9 years | -. 86 | -1.53 | -. 65 | -1.29 |
| 10-14 years | -1.89 | -3.54 | -2.26 | -4.73 |
| 15-17 years | -3.57 | -5.37 | -3.24 | -5.44 |
| Sex of focal child (ref=girl) |  |  |  |  |
| Boy | -. 60 | -1.69 | -. 15 | -. 47 |
| Mother has children with more than one former partner (ref=no) |  |  |  |  |
| Yes | . 34 | . 53 | . 03 | . 05 |
| Father has children with more than one former partner (ref=no) |  |  |  |  |
| Yes | -1.32 | -2.17 | -1.44 | -2.65 |
| Whether both parents was interviewed in 2004 or not (ref=yes) | -1.39 | -1.68 | -1.29 | -1.75 |
| $\mathrm{R}^{2}$ | . 15 |  | . 17 |  |

[^7]Table 5. Results from ordinary least square regressions of the number of monthly visitation days with non-resident father. Fathers' and mothers' reports. $\mathrm{N}=728{ }^{1}$

|  | Father's report |  | Mother's report |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Regression coefficients | $\begin{array}{r} \mathrm{T}- \\ \text { values } \end{array}$ | Regression coefficients | $\begin{array}{r} \mathrm{T}- \\ \text { values } \end{array}$ |
| Intercept | 11.07 | 13.86 | 7.67 | 11.54 |
| Mother's net income (ref=3. quintile, 233 000-265 999 NOK) |  |  |  |  |
| 1. quintile (less than 193000 NOK ) | -. 82 | -1.25 | -. 30 | -. 56 |
| 2. quintile (193000-232999 NOK) | . 2 | . 36 | . 06 | . 12 |
| 4. quintile (266000-298999 NOK) | -. 08 | -. 13 | -. 15 | -. 30 |
| 5. quintile (299000 NOK + ) | -. 28 | -. 47 | -. 69 | -1.39 |
| Father's net income (ref=3. quintile, 228 000-266 999 NOK) |  |  |  |  |
| 1. quintile (less than 174000 NOK ) | -1.63 | -2.64 | -1.79 | -3.49 |
| 2. quantile (174000-227999 NOK) | -. 81 | -1.35 | -. 20 | -. 40 |
| 4. quintile (267000-333999 NOK) | . 60 | . 95 | . 94 | 1.79 |
| 5. quintile (334000 NOK + ) | 1.26 | 2.01 | 1.26 | 2.41 |
| Mother's education (ref=high school or below) |  |  |  |  |
| University 1-4 years | . 31 | . 65 | . 57 | 1.41 |
| University 5 years + | 1.45 | 1.26 | 2.72 | 2.83 |
| Father's education (ref=high school or below) |  |  |  |  |
| University 1-4 years | -. 31 | -. 55 | . 34 | . 73 |
| University 5 years + | . 60 | . 69 | -. 41 | -. 57 |
| Number of children in relationship (ref=one child) |  |  |  |  |
| Two children | 1.04 | 2.37 | 1.52 | 4.18 |
| Three children + | -. 77 | -1.14 | . 05 | . 09 |
| Age of focal child (ref=0-5 years) |  |  |  |  |
| $6-9$ years | -1.52 | -2.48 | -. 79 | -1.54 |
| 10-14 years | -2.62 | -4.51 | -2.45 | -5.05 |
| 15-17 years | -3.98 | -5.51 | -3.53 | -5.85 |
| Sex of focal child (ref=girl) |  |  |  |  |
| Boy | -. 46 | -1.19 | -. 08 | -. 24 |
| Mother has children with more than one former partner (ref=no) |  |  |  |  |
| Yes | -. 38 | -. 55 | . 07 | . 13 |
| Father has children with more than one former partner (ref=no) |  |  |  |  |
| Yes | -1.01 | -1.53 | -1.64 | -2.97 |
| Whether both parents was interviewed in 2004 or not (ref=yes) | -1.06 | -1.18 | -. 68 | -. 91 |
| $\mathrm{R}^{2}$ | . 11 |  | . 18 |  |

${ }^{1}$ Coefficients significant at the $5 \%$ level are written in bold and those significant at the $10 \%$ level are written in italics.

Results from the multivariate regressions of number of contact days between non-resident fathers and children are reported in table 5 . Both models convey positive associations between the father's income, the age of the child and the number of children on the one hand, and the number of contact days between fathers and children on the other. According to the mothers' reports there is also a significant correlation (at the 5-percent level) between the mother's education and the number of visiting days, but the analysis based on the fathers' reports reveal no significant correlation between the mother's education and contact frequency, even though the coefficients have the same signs. Moreover, the model based on the mothers' reports also show that fathers who have children with more than one former partner, have less daytime contact with the focal child than other non-resident
fathers. The coefficient is significant at the 5 per cent level. This association is not discernible in the model based on the non-resident fathers' reporting. The model based on the mothers' reporting has somewhat higher explained variance $\left(\mathrm{R}^{2}=0.18\right)$ than the one based on the fathers' reporting $\left(\mathrm{R}^{2}=0.11\right)$.

Hence, also when it comes to the number of contact days between non-resident fathers and children, researchers would draw somewhat different conclusions regarding the effect of some independent variables in an analysis based on a sample of resident mothers and an analysis based on a sample of non-resident fathers. The effect of the fathers' income, of the number of children and the focal child's age would be visible in both samples. However, a researcher using a sample of resident mothers would conclude that also the mother's education and whether the father has children with more previous partners or not, are important predictors for the number of contact days between non-resident fathers and children. A researcher using a sample of non-resident fathers would hold that the same variables do not impact father-child contact frequency.

Next we reshape the data from a sample of couples to a sample of parents, where the non-resident father and the resident mother contribute with one observation each and run a model with interaction terms between the respondent's gender and each of the independent variables as specified in equation (4) (table 6). The first two columns present results (regression coefficients and $t$-values) based on the fathers' and mothers' reports of contact nights, and columns three and four present results based on the reports of contact days.

As shown in table 6, none of the interaction terms are significantly different from zero in either model, which means that the results based on the mothers' answers do not differ significantly from those based on the fathers' answers. However, we still conclude that it does matter which parent one asks if the aim is to identify predictors of father-child contact, since we do find some significant effects in analyses based on the mothers' answers, which are not visible in the analyses based on the fathers' answers (tables 4 and 5). Researchers rarely have access to both parents' answers and therefore need to rely on one of the parents' reporting.

Table 6. Results from ordinary least square regressions of the number of monthly visitation nights and days with non-resident father. Models with interaction terms. N=1456 ( 728 non-resident fathers and 728 resident mothers). ${ }^{1}$

|  | Nights |  | Days |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Regression coefficients ${ }^{1}$ | values | Regression | values |
| Intercept | 6.54 | 9.39 | 7.68 | 10.44 |
| Mother/father reporting (ref=mother) |  |  |  |  |
| Father | 2.04 | 2.06 | 3.38 | 3.26 |
| Mother's net income (ref=3. quintile, 233 000-265 999 NOK ) |  |  |  |  |
| 1. quintile (less than 193000 NOK) | -. 28 | -. 48 | -. 30 | -. 50 |
| 2. quintile (193000-232999 NOK) | -. 07 | . 13 | . 06 | . 11 |
| 4. qintile (266000-298999 NOK) | -. 47 | -. 89 | -. 15 | -. 27 |
| 5. quintile (299000 NOK + ) | -. 65 | -1.25 | -. 69 | -1.26 |
| Father's net income (ref=3. quintile, 228 000-266 999 NOK) |  |  |  |  |
| 1. quintile (less than 174000 NOK ) | -1.54 | -2.86 | -1.79 | -3.16 |
| 2. quintile (174000-227999 NOK) | -. 29 | -. 56 | -. 20 | -. 36 |
| 4. quintile (267000-333999 NOK) | . 99 | 1.80 | . 94 | 1.62 |
| 5. quintile ( $334000 \mathrm{NOK}+$ ) | 1.20 | 2.18 | 1.26 | 2.18 |
| Mother's education (ref=high school or below) |  |  |  |  |
| University 1-4 years | . 78 | 1.86 | . 57 | 1.28 |
| University 5 years + | 3.14 | 3.12 | 2.72 | 2.56 |
| Father's education (ref=high school or below) |  |  |  |  |
| University 1-4 years | . 60 | 1.22 | . 34 | . 66 |
| University 5 years + | -. 34 | -. 45 | -. 41 | -. 51 |
| Number of children in relationship (ref=one child) |  |  |  |  |
| Two children | 1.39 | 3.64 | 1.52 | 3.79 |
| Three children + | . 08 | . 13 | . 05 | . 08 |
| Age of focal child (ref=0-5 years) |  |  |  |  |
| 6-9 years | -. 65 | -1.22 | -. 79 | -1.40 |
| 10-14 years | -2.26 | -4.46 | -2.45 | -4.57 |
| 15-17 years | -3.24 | -5.13 | -3.53 | -5.30 |
| Sex of focal child (ref=girl) |  |  |  |  |
| Boy | -. 15 | -. 44 | -. 08 | -. 21 |
| Mother has children with more than one former partner (ref=no) |  |  |  |  |
| Yes | . 03 | . 05 | . 07 | . 12 |
| Father has children with more than one former partner (ref=no) |  |  |  |  |
| Yes | -1.44 | -2.50 | -1.64 | -2.69 |
| Whether both parents was interviewed in 2004 or not (ref=yes) | -1.29 | -1.65 | -. 68 | -. 82 |
| Interaction terms. |  |  |  |  |
| Mother's net income * father reporting |  |  |  |  |
| 1. quintile * father reporting | -. 60 | -. 74 | -. 52 | -. 60 |
| 2. quintile * father reporting | . 62 | . 76 | . 17 | . 20 |
| 4. quintile * father reporting | . 55 | . 74 | . 08 | . 10 |
| 5. quintile * father reporting | . 60 | . 81 | . 41 | . 53 |
| Father's net income * father reporting |  |  |  |  |
| 1. quintile * father reporting | -. 24 | -. 32 | . 17 | . 21 |
| 2. quintile * father reporting | -. 21 | -. 28 | -. 61 | -. 78 |
| 4. quintile * father reporting | -. 09 | -. 12 | -. 34 | -. 41 |
| 5. quintile * father reporting | . 28 | . 36 | . 00 | -. 00 |
| Mother's education * father reporting |  |  |  |  |
| University 1-4 years * father reporting | -. 16 | -. 27 | -. 25 | -. 40 |
| University 5 years + * father reporting | -1.11 | -. 78 | -1.26 | -. 84 |
| Father's education * father reporting |  |  |  |  |
| University 1-4 years * father reporting | -. 12 | -. 17 | -. 65 | -. 89 |
| University 5 years + * father reporting | . 23 | . 22 | 1.00 | . 90 |


|  | Nights |  | Days |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Regression coefficients ${ }^{1}$ | values | Regression coefficients ${ }^{1}$ | values |
| Number of children in relationship * father reporting |  |  |  |  |
| Two children * father reporting | -. 35 | -. 65 | -. 49 | -. 85 |
| Three children $+*$ father reporting | -. 55 | -. 66 | -. 82 | -. 93 |
| Age of focal child * mother/father reporting |  |  |  |  |
| 6-9 years * father reporting | -. 21 | -. 28 | -. 73 | -. 92 |
| 10-14 years * father reporting | . 37 | . 51 | -. 18 | -. 23 |
| 15-17 years * father reporting | -. 33 | -. 37 | -. 46 | -. 49 |
| Sex of focal child * father reporting |  |  |  |  |
| Boy * father reporting | -. 45 | -. 94 | -. 38 | -. 76 |
| Mother has children with more than one former partner * father reporting |  |  |  |  |
| Yes * father reporting | . 31 | . 36 | -. 45 | -. 50 |
| Father has children with more than one former partner * father reporting |  |  |  |  |
| Yes * father reporting | . 12 | . 15 | . 63 | . 73 |
| Whether both parents was interviewed in 2004 or not * father reporting | -. 10 | -. 09 | -. 38 | -. 33 |
| R2 | . 19 |  | . 18 |  |

${ }^{1}$ Coefficients significant at the $5 \%$ level are written in bold and those significant at the $10 \%$ level are written in italics.

## 7. Summary and discussion

With increasing divorce rates, there is a great need for research on the childcare arrangements among parents living apart and on contact patterns between non-resident parents and children. However, good data are scarce in this field. Most researchers would probably prefer to have information from both resident and non-resident parents, but since such data are rarely available, analyses are often based on information from one of the parents only, either the resident or the non-resident parent.

It is well established that non-resident parents tend to depict themselves as more actively involved with their children than resident parents do, but it is less clear whether it matters which parent we ask when the aim is to explore the predictors of visitation frequency between non-resident parents and their children. The present paper contributes to this research by comparing results based on resident and non-resident parents' information in a high-quality Norwegian survey with a representative sample of parents living apart and a lot of register data added. The survey provides information on the children's daytime visits as well as overnight stays with their non-resident parent. In Norway, fathers face strong normative expectations and political incentives to be actively involved with their children both when parents live together and following a divorce or union dissolution.

We look at pairs of non-resident fathers and resident mothers. Visitation frequency is measured by number of nights and the number of days the child spent with the non-resident parent on a monthly
basis. In order to avoid that different results stem from different reporting on the independent variables, we include only independent variables based on register data.

In agreement with previous research, we find that non-resident fathers report more father-child visitation than resident mothers. However, a significant proportion of couples agree on the number of contact nights/days, and in some couples the father reported more contact nights/days than the mother.

On the whole, multivariate OLS-regressions demonstrate that the amount of father-child contact is associated with the same independent variables whether we rely on the resident mothers' or the nonresident fathers' answers, but some differences do appear. As for the number of contact days, the resident mother's educational attainment and whether the father has children with more than one former partner have statistically significant effects in the subsample of resident mothers, but not in the subsample of non-resident fathers. Also regarding the number of overnight stays, regressions based on the resident mothers' answers convey more significant associations than those based on the resident fathers' answers, although the coefficients have the same signs.

Even though a model with interactions terms between the respondents' gender and each of the independent variables shows no significant results, we would argue that it actually does matter which partner we rely on when the aim is to identify predictors of the amount of contact between nonresident fathers and children. If researchers do not have access to information from both partners, which is usually the case, they have to rely on information from one partner only. If two researchers had conducted identical analyses of the predictors of father-child contact, one with access to the resident mothers' answers only and the other with access to the non-resident fathers' answers only, they would have drawn slightly different conclusions as to the effect of some independent variables. This would be the case even though the effects of these independent variables do not differ significantly when tested formally in a model with interaction terms, since this cannot be done without access to reports from both the resident and the non-resident parent.

We thus conclude that it actually does matter whether we ask the resident mother or the non-resident father when the aim is to identify predictors of contact frequency between non-resident fathers and children, at least when it comes to the effect of the resident mother's education. This is so even when we use information from parents of the same children, and when different reporting on the independent variables are excluded by the use of register-based independent variables only. Our results thus differ from those of Seltzer and Brandreth (1994) who find that it does not matter whether
analyses are based on the non-resident fathers' or the resident mothers' reports when the aim is to disentangle factors that predict extensive father-child contact. Although we observe many of the same predictors in analyses of the fathers' and the mothers' answers, important predictors such as the mothers' education and the number of the fathers' former partners have significant effects when we rely on the mothers' answers but not when we rely the fathers' answers.

Since we have no objective measure of the extent of father-child contact, we can only speculate why we find a positive association between the mother's education and father-child contact based on the mothers' but not on the fathers' answers. Highly educated mothers may portray the father as more involved with the children than he really is, since they value gender equality highly and want to appear as a gender-equal ex-couple. If this were the case, educational differences in response bias because of social desirability would be at play. This is, however, at odds with our anticipation that highly educated parents negotiate more systematically on contact arrangements between fathers and children than the less educated, so that highly educated mothers are better informed on father-child contact frequency than the less educated mothers. There is also the possibility that less educated mothers underestimate the father's involvement more than the highly educated do, because of more discontentments with his financial contributions. Differences across various groups of fathers in overor underreporting contact-frequency may also play a role.

We believe that the analysis in the present paper provides an important contribution to the discussion on whether predictors of the extent of father-child contact differ in samples of resident mothers and non-resident fathers. It is based on a survey of pairs of parents living apart, uses two different measures of father-child contact and includes only register-based independent variables. However, our analysis also has certain limitations.

Since we use independent variables taken from registers only, some important predictors are omitted, such as conflict level between the parents. Even information on present civil status and information on whether they have children with a new partner or not, was collected by interview. Future analyses should include such data, particularly if it can be taken from registers so that possible effects resulting from different reporting from the parents can be avoided. Moreover, future analysis should also compare subsamples of resident fathers and non-resident mothers. Such arrangements may have become more common since 2004, when our data were collected, and discrepancies between the parents' reporting may differ from those identified in the present paper. It should also be an ambition
for future research to better disentangle the reasons why different predictors of father-child contact are observed in samples of resident mothers and non-resident fathers.

Although the analysis in the present paper may not be strictly generalized to countries with different juridical regulations and normative expectations for parents living apart, we argue that they do point to the importance of including both resident and non-resident parents' in future studies of parents living apart. This is so whether the aim is to study contact frequency between non-resident parents and children or the predictors of various types of contact. Samples comprising one parent only should be a last resort only if more adequate data cannot be obtained.

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[^1]:    ${ }^{1}$ The survey also included subsamples of resident fathers and non-resident mothers, but in 2004, these still constituted a small minority of parents living apart (Skaare and Fodnesbergene, 2005).

[^2]:    ${ }^{2}$ Kamo (2000) found that the variation in husbands' time input at home was better explained (higher explained variance) in models where the dependent variable was based on his spouse's report $\left(\mathrm{R}^{2}=0.143\right)$ than on his own ( $\mathrm{R}^{2}=0.186$ ). Nevertheless, he recommends a combined measure based on both spouses' responses in analyses in the field.

[^3]:    ${ }^{3}$ This procedure may be criticized for treating the two parents as independent observations, since the sample of parents were identified through their relations with a sample of children (cf. Data and measurement).
    ${ }^{4}$ The ministry is now called Ministry of Children, Equality and Social Inclusion.
    ${ }^{5}$ The principal aim of the study was to assess the effects of a new formula for calculating child maintenance, introduced in 2003. According to the old set of rules, the maintenance payment constituted a fixed percentage of the non-resident parent's gross income. According to the rules implemented in 2003 the maintenance payment is calculated in the following way: The expenses for support of a child are set according to the age of the child and shared between the parents according to their income. The maintenance payment is reduced for the time spent with the child, so that more contact days entail less payment.

[^4]:    ${ }^{6}$ The questions were asked as follows: "Question 20: Did you/your ex-partner spend any time with the child during October 2004?" If yes, the respondent was asked: "Question 21a: How many days did you/your ex-partner spend with the child during October? Half a day shall be counted as one whole day." And then: "Question 21b: Did you/your ex-partner also spend some nights together during October?" If yes, the respondent was asked: Question 21c: "How many nights did you/your ex-partner spend with the child?"

[^5]:    ${ }^{7}$ When the child is registered living with the father, the level of contact between the non-resident parent (i.e. the mother) and the child is considerably higher. The mother reports more contact than the father, but the average difference between the nonresident and resident parent's reports is smaller than when the child is registered living with the mother. This may be due to the fact that many of these children actually have shared residence (Kitterød, 2005; Jensen, 2005).

[^6]:    ${ }^{8}$ Additional analysis revealed that the negative correlation between the age of the child and contact-frequency applies for both boys and girls (results not shown).

[^7]:    ${ }^{1}$ Coefficients significant at the $5 \%$ level are written in bold and those significant at the $10 \%$ level are written in italics.

