Questioning children about family relations within a multi-actor perspective: selectivity bias and social desirability according to the participation and presence of parents

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1 Introduction

Family sociology addresses topics surrounding children's family life, such as parenting and socialization. Yet, children were traditionally considered as appendages of their parents and incapable of formulating their own views and attitudes (Haugen, 2008). Research on the family strongly relied on proxy reports of adults to get an insight in children's family life rather than surveying children themselves (Bell, 2007). This passive conception of the child has drastically changed the past two decades. Researchers are increasingly emphasizing children's agency within the family (Chin & Phillips, 2004; Haugen, 2010; Mason & Hood, 2011).

The acknowledgment of children's agency has also influenced their position in research. Children are more and more considered as a distinct population group who can provide reliable information on themselves and their family members (Mason & Hood, 2011). The inclusion of children as actors in family research also entails some challenges for the researcher (Mason & Hood, 2011). First of all, the need for parental consent before children can be surveyed may involve an additional selection process into the research sample. Second, there are concerns that children do not have the cognitive, communicative and social skills necessary for providing valid and reliable responses to survey questions (Bell, 2007). This can threaten the measurement equivalence of latent concepts between adults and children. Measurement equivalence is a necessary condition to compare answers of children and parents in a reliable way. Finally, parental presence cannot always be prevented during the interview. Children may respond differently in case parents are present.

This study investigates the challenges related to surveying children on family life and aims at making a contribution to previous studies in a number of ways. First of all, this study assesses measurement equivalence of the latent concepts between children and parents. This is a necessary prerequisite when making group comparisons (Davidov, Datler, Schmidt, & Schwarz, 2011). Previous studies on parent-child agreement on family processes have, to our knowledge, not investigated measurement equivalence. Secondly, the selectivity of the child sample is modelled by investigating the determinants of parents and child consent (Tigges, 2003). Thirdly, this study gives special attention to the effect of parental presence during the interview on children's reports.

We use the database of the 'Divorce in Flanders' project in which different actors are questioned of 1025 intact and 3525 dissolved reference marriages (Mortelmans et al., 2011). Multi-actor data allow to compare the perspectives of different actors and can be used to enhance the reliability and validity of the measurement and to explore processes of social desirability. Multi-actor data also allow to explore differences in the participation of actors according to characteristics described by other actors (Kalmijn & Liefbroer, 2011).

2 Literature review

2.1 Non-response bias: The role of parental and child consent

Participation of children in surveys often depends on the consent of both parents and child. Kalmijn & Liefbroer (2011) have investigated determinants of parental consent within a multi-actor dataset. Higher educated parents and (adult) children more often agree to participate. Divorced parents tend to decline the participation of their children and children of divorced parents also tend to participate less in a survey. Fathers more often give their consent than mothers, but girls more often participate in the survey than boys. In addition, the quality of the parent-child relationship influences the likelihood of the child to participate in the survey. A high quality relationship increases the likelihood that both parent and child agree to participate in the survey. These selection processes can bias the results found in a child sample and should therefore be taken into account

when analyzing the data. Kalmijn & Liefbroer (2011) suggest Heckman selection method to correct for any source of non-participation of the child. Also, using sample weights can be a possible avenue to correct for underrepresentation of certain groups within the sample.

2.2 Measurement equivalence between parents and children

Children are still developing their cognitive, communication and social skills. Developmental psychologists believe that only from 16 years and older, children are capable to interpret and answer survey questions in a completely similar manner as adults (de Leeuw, Borgers, & Smits, 2004). Studies have shown that children with low cognitive abilities tend to respond survey question less reliably (de Leeuw et al., 2004). As a consequence, testing measurement equivalence is a necessary prerequisite before parents' and children's reports can be compared.

Measurement equivalence refers to whether concepts can be measured in a stable way across population groups, survey methods or over time (Davidov, Datler, Schmidt, & Schwarz, 2011). Different levels of measurement equivalence can be distinguished, namely configural, metric and scalar equivalence. They are nested within each other, with configural equivalence being the lowest level and scalar equivalence the highest (Van de Vijver, 2011). Configural equivalence deals with the items measuring a latent concept. To reach configural equivalence, the same latent concepts should be measured by the same items in the different groups. Configural equivalence is a necessary condition that needs to be fulfilled before the other levels of invariance are tested (Raju, Laffitte & Byrne, 2002). After testing configural equivalence, one must assess metric equivalence. In metric equivalence, the relations between the items and the latent concepts (factor loadings) should be equal for all groups. After confirming this, one can investigate the scalar equivalence. Scalar equivalence does not only test the relations between the items, but also the intercepts of the items. If this third level of equivalence is confirmed, this implies that mean differences are the result of substantial differences between the groups (Raju, Laffitte & Byrne, 2002).

Only in case of scalar equivalence, the answers of children and parents can be compared. If children and parents have divergent perspectives on family life, the choice of informants can influence results (Aquilino, 1999). A number of studies have indicated that parents have a different view of the relationship they have with their children, than the children themselves (Aquilino, 1999; Mandemaekers & Dykstra, 2008; Noller, Seth-Smith, Bouma, & Schweitzer, 1992; Xiao, Li, & Stanton, 2011). Most studies report that parents have a more positive view of family processes than their children. This finding can be explained by the generational stake theory. This theory emphasizes the need of each generation to see family relations from their own perspective. Parents tend to give a positive impression of the relationship they have with their children, as they desire to maintain a sense of generational closeness and continuity. Children, on the other hand, strive to become independent of their parents and tend to be more negative about the relations in the family. This is important, as they need to distance themselves from the family bonds in order to become an adult (Aquilino, 1999; Noller et al., 1992). These analyses however do not take into account the methodological issues of selection bias and response bias that are included in this study.

2.3 The bystander effect of parents

Children tend to be more susceptible to issues such as suggestive questioning, social desirability and interviewer effects. Children may especially over-report socially desirable behavior (or under-report socially undesirable behavior) when they fear that this information is shared with their parents or other adult authorities. Within this respect, parents' presence during the child's interview can lead to a higher tendency for socially desirable responses (Moskowitz, 2004; Ogan et al., 2012).

Three factors influence whether parents' presence affects children's response. First of all, it depends whether the child is asked objective or subjective information, with subjective information being more susceptible to social desirability. Secondly, if the bystander has prior knowledge of the information, there is a smaller probability of a bystander effect. Thirdly, if the child expects negative consequences of sharing certain information, there is a higher risk of social desirability (Krumpal, 2011). With regard to family relationships, there may be a high risk of social desirability when parents are

present. This is subjective information and children can expect negative consequences if they report a low quality relationship between their parents or a high frequency of parental conflict.

3 Data and methods

3.1 Data: Divorce in Flanders study

The Divorce in Flanders dataset is the outcome of a cooperation between four Flemish universities and the Research Centre of the Flemish government. (Mortelmans et al. 2011). The data collection of the project took place in 2009-2010. A sample of reference marriages was drawn from the Belgian National Register. The sample was proportional for year of marriage, but there was an overrepresentation of dissolved marriages: two-third of the selected marriages was dissolved and one-third was intact at the time of the interview. A number of selection criteria were imposed on the marriages. These criteria are:

- Partners of the marriage had to be of different sex
- Marriage between 1971 and 2008
- Reference marriage was first marriage for both partners
- Both partners were not divorced more than once at time of the interview
- Both partners were alive at the time of the interview
- Both partners were domiciled in the Flemish region at time of the marriage and at time of the interview
- Both partners were between 18 and 40 years old at time of the marriage
- Both partners have the Belgian nationality from birth

The dataset is characterized by a multi-actor structure. For each selected marriage, the two partners, a child (if any), two parents of the partners and in case of a dissolved marriage, new partners (if any) were invited to participate in the study. Figure 1 presents the multi-actor diagram for intact reference marriages, Figure 2 the multi-actor diagram for dissolved reference marriages.

Figure 1. Multi-actor diagram for intact reference marriages in the Divorce in Flanders study

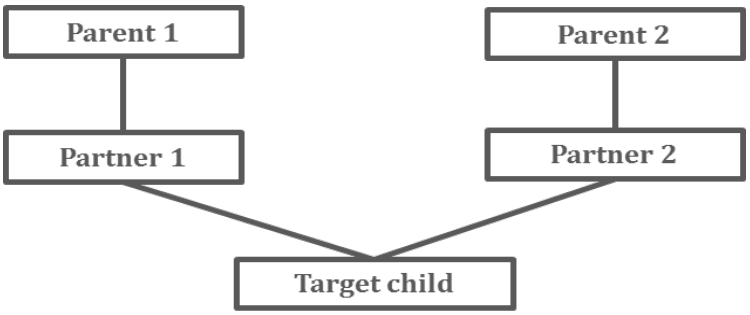
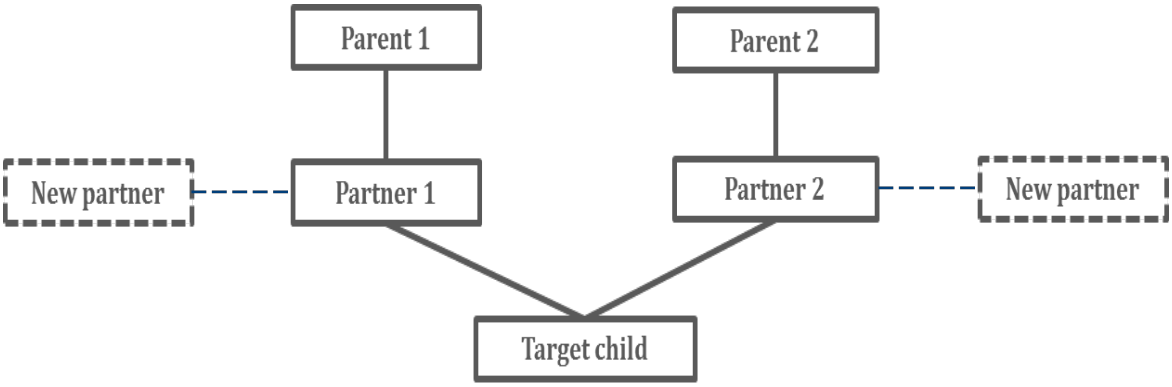


Figure 2. Multi-actor diagram for dissolved reference marriages in the Divorce in Flanders study



In total, 8,506 reference marriages were selected: 2,502 marriages were intact and 6,004 marriages were dissolved. At least one partner of the reference marriage participated in 41% of the intact reference marriages, whereas this was the case for 59% of the dissolved marriages. The proportion of marriages where two partners participated in the study is significantly higher in intact marriages (34%) than in dissolved marriages (21%).

During the interview with the first partner of the reference marriage, the target child was selected. The target child is a biological or adoptive child of the two partners of the reference marriage. The highest preference was given to children who were 10 years and older and live with at least one of the parents, preferably the first interviewed parent. The second highest preference was attributed to children of 18 years and older who did not live with their parents. The third highest preference was for children

younger than 10 who were residential with at least one parent, preferably the first interviewed parent. The lowest preference was given to children younger than 18 who did not reside with at least one parent. These latter two groups were not selected for an interview. If there were more children in the same group of preference, the target child was randomly selected.

If the selected child was younger than 18 years old, the consent of the parents was required before the child could be contacted. The procedure for parental consent differed between intact and dissolved marriages. In intact marriages, the consent was asked from the first interviewed partner. If the partner agreed that the child could participate in the study, the child was contacted. If the partner disagreed, the child was not contacted for an interview. In dissolved marriages, the first interviewed partner was also asked for a consent to interview the child. One parental consent was however not considered as sufficient in this case. In case the first interviewed parent gave permission to contact the child and was living together with the child, this parent was asked whether his/her ex-partner would also give his/her consent. If the answer to this question was positive, the child was contacted. If the answer was no or don't know, contacting the child was put on hold until the second partner was interviewed. Approximately one out of ten mothers and fathers indicated that their ex-partner would not agree, and another 10% answered to be uncertain about the approval of the ex-partner. The large majority of mothers (83%) and fathers (79%) indicated that their ex-partner would agree with the participation of the child. In case the first interviewed parent was not living together with the child (mainly fathers), the contact of the child was always put on hold until the other parent was interviewed. This procedure was not necessary from a legal point of view, but it was done to prevent conflict between ex-partners. Off course, children could also refuse to participate in the study when they were contacted.

3.2 Research sample

The research sample of this study consists of reference marriages with a target child between 10 and 17 years old who lives with at least one parent. In total, the research sample consists of 1,151 reference marriages with 256 intact and 895 dissolved

reference marriages. The overrepresentation of dissolved marriages in the research sample is higher (77.78%) than in the total sample.

The first part of Table 1 presents the single-actor response rates of the reference marriages in the research sample. In more than three on four reference marriages (78%), the mother participated in the study. The single-actor response of fathers is lower (66%) . The child participated in almost half of the cases (54%).

The second part of Table 1 presents the multi-actor response rates. In almost one third of the reference marriages, both parents and the target child participated in the study. Participation of the child without participation of the mother (5%) is much less frequent than participation of the child without participation of the father (19%).

Table 1. Response rates in research sample (N=1151)

Single actor respons	n	% (marriages)
Mother	900	78,2
Father	759	65,9
Child	622	54,0
Total (actors)	*2281*	
Multi-actor response rates	n	% (marriages)
Mother	176	15.3
Mother – child	216	18.8
Father	195	16.9
Father - child	56	4.9
Father – mother	158	13.7
Father – mother - child	350	30.4
Total (marriages)	*1151*	

3.3 Variables

3.3.1 Conflict between parents

The conflict scale consists of five items. Respondents were asked how frequent five specific conflict situations occurred during the last twelve months 1) with their partner (partners of intact marriages); 2) with their ex-partner (partners of dissolved marriages); or between their parents (children). The 7-point frequency scale ranges from 1 = Never to 7 = Daily. If partners of dissolved marriages report to have neither personal contact nor contact by telephone or internet with their ex-partner, they did not receive these questions. Children always received these questions. The mean scores for each item are presented per actor in Table 2. Overall, the frequency of conflict is very low. Children report slightly less verbal conflict (blaming each other and yelling at each other) than mothers and fathers. The proportion of missings is higher in the group of fathers and children than in the group of mothers.

Table 2. Mean scores on Conflict Scale items per actor

	Blame each other	Yell or scream	Use physical violence	Throw or break things	Not want to talk to each other	n
Child	1.94 (1.21)	1.59 (1.05)	1.03 (0.26)	1.04 (0.31)	1.59 (1.37)	622
Mother	2.54 (1.40)	1.93 (1.20)	1.04 (0.29)	1.07 (0.28)	1.47 (0.80)	900
Father	2.41 (1.26)	1.82 (1.07)	1.01 (0.09)	1.07 (0.30)	1.47 (0.73)	753

Source: Divorce in Flanders. Notes: Standard errors between parentheses.

3.3.2 Quality of communication between parents and child

The quality of communication between parent and child is measured by the openness in communication and problems with communication subscales of the Parents-Adolescent Communication Scale (Barnes and Olson 1986). The 7-point frequency scale ranges from 1= *Totally disagree* to 7 = *Totally agree*. This scale was filled in by partners of both intact and dissolved marriages. A child-focused version of this scale was offered to children twice: one for their mother and one for their father. The mean scores for each item of the Openness in Communication subscale are presented per actor in Table 3. Children tend to give a more negative account of the openness in communication items than their mother and father. For the problems in communication scale on the other hand, mothers

give a more negative view than their children. The answers of fathers and children on this scale are very similar.

Table 3. Mean scores on openness in communication subscale per actor

	Child shows affection	Child avoids topics	Satisfied with communi-cation	Easy to discuss problems	Child expresses true feeling	n
Mother	5.82 (1.47)	3.75 (1.94)	5.72 (1.33)	5.53 (1.42)	5.24 (1.55)	900
Father	5.44 (1.56)	4.46 (1.84)	5.39 (1.44)	5.04 (1.54)	4.62 (1.65)	753
Child -Mother	5.38 (1.42)	4.29 (1.90)	5.80 (1.34)	5.32 (1.50)	5.02 (1.54)	622
Child - Father	4.87 (1.60)	4.73 (1.77)	5.14 (1.57)	4.30 (1.71)	4.17 (1.64)	622

Source: Divorce in Flanders. Notes: Standard errors between parentheses.

The mean scores for the Problems with Communication subscale are presented in Table 4. For the items in this scale, mothers give a more negative view than their children. The answers of fathers and children on this scale are very similar.

Table 4. Mean scores on problems with communication subscale per actor

	Child says things better unsaid	Parent nags to child	Parent insults child	Parent says things better unsaid	n
Mother	3.38 (1.89)	2.61 (1.50)	2.13 (1.37)	2.69 (1.63)	900
Father	3.13 (1.70)	2.30 (1.36)	1.97 (1.24)	2.48 (1.57)	753
Child -Mother	3.82 (1.81)	2.35 (1.50)	1.85 (1.23)	2.50 (1.68)	622
Child - Father	3.31 (1.80)	2.23 (1.45)	1.99 (0.41)	2.44 (1.65)	622

Source: Divorce in Flanders. Notes: N: Standard errors between parentheses.

3.3.3 Characteristics of child and parents

Children in the research sample are on average 14 years old, the mean age does not differ according to marriage status. More girls participated from intact marriages, whereas the distribution is more equal for dissolved marriages. The majority of children

in dissolved marriages (58%) live with their mother. Approximately one third (36%) lives in co-residence and a small percentage (6%) live with their father. Following Melli (1999), the threshold for shared residence was set at 33%.

The educational level of mothers and fathers is measured by a categorical variable with the following categories: 1) low: no degree of higher secondary school; 2) medium: degree of higher secondary school; and 3) degree of higher education. Mothers and fathers in intact marriages are more highly educated than those in dissolved marriages. Parents in dissolved marriages are more likely to have a medium or low educational level. The participation of parents in the survey is also included. In 4 out of 5 intact marriages, both parents participated. This was the case for only one third of the dissolved marriages. In the dissolved marriages, mothers tended to participate more in the study than fathers.

The descriptive values of the child and parent characteristics are presented in Appendix.

3.4 Methods

3.4.1 Measurement equivalence testing

Multi-group confirmatory factor analyses are performed in order to inspect the measurement equivalence of conflict, openness in communication and problems in communication between mothers, fathers and children. Currently, multi-group confirmatory factor analysis (MGCFA) is the most preferable SEM technique for evaluating measurement invariance between groups (Lee, Little, & Preacher, 2011). For conflict, the measurement equivalence is assessed for mother, fathers and children in one model. For openness in communication and problems in communication, measurement equivalence is tested 1) between mothers and children; and 2) between fathers and children.

A top-down approach is applied to the measurement equivalence test of the conflict and parent-child communication scales. The most constrained model is tested first, and constraints are gradually removed in order to improve the fit of the model (if

necessary). The most constrained model is the scalar invariant model: factor loadings, intercepts and factor structure are constrained to be equal across the groups. The fit indices, modification indices, parameter estimates and expected parameter changes of this model are inspected. If they indicate an insufficient model fit, constraints are gradually removed (Davidov, Meuleman, Billiet, & Schmidt, 2008). This does not necessarily mean that the measurement model is not equivalent across the groups. Byrne, Shavelson and Muthén (1989) have demonstrated that partial measurement invariance is also sufficient for further comparisons across groups with respect to the latent variable. To establish partial metric invariance, two items with equal factor loadings per latent variable are sufficient. For partial scalar invariance, at least two intercepts per indicator should be equal for all groups (Davidov, Datler, Schmidt, & Schwartz, 2011).

The fit indices that are used to inspect the global fit of the model are the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The CFI and the TLI can take on each value between 0 and 1. In general, values of 0.90 and higher are considered to be indicators of a good model fit (Byrne, 2011). For the RMSEA, we take a cut-off value of 0.08: values smaller than .08 suggest a good model fit (Browne & Cudeck, 1993). SRMR values close to 0.08 and below indicate a good fit of the data.

Modification indices and expected parameter changes (EPC) can be used to assess the way in which the model fit can be improved. These two indices should always be considered together, as the modification indices are sensitive to sample size. Changes to the model should only be made on the condition that 1) the change is interpretable and 2) both EPC and modification index are substantially high (Whittaker, 2012, Brown, 2006). For the standardized EPC, we will work with a cut-off value of 0.2 (Brown, 2006). Finally, the size and significance of parameter estimates can be used to assess the model. Standardized factor loadings of 0.30 and higher indicate that the item is meaningfully related to the underlying latent variable (Brown, 2006).

Finally, in case of scalar equivalence, we can compare the factor scores of parents and children in a substantive way. These factor scores are calculated with full information

maximum likelihood estimations. For each observation, a function is estimated using those variables that have a non-missing value. These functions are accumulated and maximized across the entire sample (Arbuckle 1996). Observations with missing data are not excluded from the data, but their factor scores are calculated based on their other responses. We apply two strategies to compare the factor scores of parents and children. The first strategy is to look at the strength of the bivariate correlation between the factor scores of children and mothers and fathers. The second strategy is to perform a paired t-test in order to see the mean differences in the scores of parents and children.

3.4.2 Logistic regression

To model the likelihood of parents and children to refuse the child interview, we estimate binary logistic regression models. In a first model, we estimate the likelihood of parents explicitly not giving permission to interview the child. We therefore model the likelihood of refusal versus non refusal (permission or additional permission other parent required). In a second model, we estimate the likelihood of children not participating in the study after parental permission was given. Analyses are performed on respectively all marriages, the intact marriages only and the dissolved marriages only. The first sample allows to test the differences between intact and dissolved marriages. The subsamples by marital status allow to see the effect of the other variables within both groups. The same subsamples are distinguished to model the likelihood of parents being present during the child interview using binary logistic regression models.

3.4.3 Multiple linear regression analysis

To model the effect of parents being present during the child interview, we perform multiple linear regression analyses modelling children's report on their communication with mother and father and the frequency of parental conflict. We use the factor scores for parental conflict and parent-child communication from the confirmatory factor analyses as dependent variables. As for the previous models, we perform the analysis on respectively all marriages, the intact marriages and dissolved marriages.

4 Results

4.1 Measurement equivalence of family relations scales

4.1.1 Conflict between parents

The scalar invariant model for the five items measuring conflict does not fit the data properly. The fit indices (CFI=.741, TLI=.749, RMSEA=.151, SRMR=.132) suggest that the model needs to be adapted in order to improve the model fit. The standardized factor loading of the third item (physical violence) is lower than .30 in the three groups and is removed from the factor structure. This strongly improves the model fit (CFI=.973, TLI=.973, RMSEA=.055, SRMR=.033) and we proceed with this model. Despite the low standardized factor loading of the fourth item for children and fathers, the model fit does not need to be improved an no further adjustments are made. The estimates of the scalar invariant model are presented in Table 5.

Table 5. Scalar invariant measurement of conflict: Unstandardized factor loadings, standard errors and significance.

	Unstand. estimate	S.E.	Sign.
Blame each other[a]	1.000	0.000	n.a.
Yell or scream	0.957	0.065	***
Throw or break things	0.065	0.006	***
Not want to talk to each other	0.373	0.035	***

Source: Divorce in Flanders. Notes: N mothers = 900; N children=622, N fathers = 753. [a]: marker indicator, significance cannot be calculated.

The correlation between the factor scores on parental conflict of children and mothers (.17, p<.001) and of children and fathers (.21, p<.001) is rather weak. A paired t-test shows a significant difference between the scores of children and mothers (x=-0.35, S.E.= 0.05, p<.001) and of children and fathers (x=-0.18, S.E.= 0.05, p<.001). Children report on average less parental conflict than their mothers and fathers.

4.1.2 Communication between parents and child

Measurement equivalence of openness and problems in communication between parents and children is first tested between mothers and children. The scalar invariant model fits the data sufficiently (CFI=.929, TLI=.923, RMSEA=.082, SRMR=.065). The estimates of the scalar invariant model are presented in Table 6.

Table 6. Scalar invariant measurement of openness and problems in communication between mothers and children: Unstandardized factor loadings, standard errors and significance.

	Unstand. estimate	S.E.	Sign.
Openness in communication			
Child shows affection[a]	1.000	0.000	n.a.
Child avoids topics	-0.844	0.054	***
Satisfied with communication	1.075	0.039	***
Easy to discuss problems	1.182	0.044	***
Child expresses true feeling	1.242	0.045	***
Problems in communication			
Child says things better unsaid[a]	1.000	0.000	n.a.
Parent nags to child	2.054	0.219	***
Parent insults child	1.911	0.209	***
Parent says things better unsaid	2.189	0.232	***

Source: Divorce in Flanders. Notes: N mothers = 900; N children=622. [a]: marker indicator, significance cannot be calculated.

The correlation between the factor scores of mother and child are modest for both openness in communication (0.44, p<.001) and problems in communication (0.33, p<.001). Paired t-tests demonstrate that mothers report on average more frequent open communication ($\bar{x}$=-0.16, S.E.= 0.04, p<.001) and more frequent negative communication ($\bar{x}$=-0.22, S.E.= 0.04, p<.001) than children.

Next, measurement equivalence is assessed between fathers and children. This scalar invariant model also fits the data sufficiently (CFI=.937, TLI=.931, RMSEA=.081, SRMR=.060). The estimates of the scalar invariant model are presented in Table 7.

Table 7. Scalar invariant measurement of openness and problems in communication between fathers and children: Unstandardized factor loadings, standard errors and significance.

	Unstand. estimate	S.E.	Sign.
Openness in communication			
Child shows affection[a]	1.000	0.000	n.a.
Child avoids topics	-0.723	0.046	***
Satisfied with communication	1.042	0.038	***
Easy to discuss problems	1.231	0.044	***
Child expresses true feeling	1.186	0.042	***
Problems in communication			
Child says things better unsaid[a]	1.000	0.000	n.a.
Parent nags to child	1.459	0.129	***
Parent insults child	1.583	0.139	***
Parent says things better unsaid	1.855	0.156	***

Source: Divorce in Flanders. Notes: N children=622, N fathers = 753. [a]: marker indicator, significance cannot be calculated.

The correlation between the factor scores of fathers and children is only modest with regard to openness in communication (.25, p<.001) and problems in communication (.28, p<.001). The paired t-test shows that fathers report more frequent open communication than their children ($\bar{x}$=-0.39, S.E.= 0.06, p<.001). The differences in father and child reports regarding problems in communication are smaller ($\bar{x}$=-0.07, S.E.= 0.04, p=.038).

4.2 Selection bias in the Divorce in Flanders sample: parent and child consent

Table 9 present the outcomes for the parent's consent to contact the child and the consent of the child to be interviewed. Overall, for the majority of the target children, the parent(s) gave permission to contact the child, both within intact marriages (78%) and dissolved marriages (47+19=66%). There are nevertheless important differences in the outcome of the child interview between intact and dissolved marriages.

Within the group of dissolved marriages, there is a large group of selected target children (19%) that were not contacted as only one parent gave the permission to contact the child and the other parent did not participate. Consequently, there was full parental consent for only 57% of the selected target children from dissolved marriages, compared to 89% of the target children from intact marriages. In addition, parents from dissolved marriages were two times as likely to give no permission to contact the child.

In case of full parental permission, the child was contacted for participation. In almost one out of ten intact and dissolved marriages, the parent(s) gave permission to contact the child, but the child refused to participate in the study. From the 227 (196+29) children from intact marriages and 512 (424+88) children from dissolved marriages whose parents gave permission to contact them, respectively 13% and 21% of the children refused to be interviewed. At the end of the fieldwork, 78% of the selected target children from intact marriages were interviewed and 47% of the selected target children from dissolved marriages.

Table 9. Parent and child consent for child interview, by marriage status

		Intact marriages		Dissolved marriages	
Parent(s)	Child	n	%	n	%
No permission to contact child	Not contacted	29	11	211	24
One permission to contact child, one unknown (on hold)	Not contacted			172	19
Permission to contact child	No interview	29	11	88	10
Permission to contact child	Interview	198	78	424	47
Total		256	100	895	100

Source: Divorce in Flanders, authors' calculations

Table 10 presents the results for the binary logistic regression modelling the refusal of parents and children. The models are estimated for the complete sample, and for intact and dissolved marriages separately. The models including all marriages show that divorced parents are less likely to give permission to contact the child than married parents. After parents gave permission for the child interview, we find no significant difference in child consent according to the marital status of the parents.

Next, married parents are less likely to give permission to interview a boy than a girl. We find no differences according to the sex of the target child for dissolved marriages. Children with a low or medium educated mother are more likely to refuse to participate than children with a high educated mothers within the group of intact marriages. Within the group of dissolved marriages, children with a low or medium educated father are more likely to participate.

For children in intact marriages, participation of mother only is associated with a higher likelihood of parental refusal compared to marriages from which both parents participated. The likelihood of child refusal is higher in case only one of the parents of intact marriages participated, and even more in case only the father participated. Note that it is very unlikely for intact marriages that only one parent participates in the study. Within the group of dissolved marriages, we find a lower likelihood of parental refusal in case only the mother participated in the study.

Table 10 Odds ratio's from logistic regression models predicting the refusal of parents and children for child participation

	All marriages		Intact marriages		Dissolved marriages	
Exp(B)	**Parent refused**	**Child refused**	**Parent refused**	**Child refused**	**Parent refused**	**Child refused**
Intercept	0,12***	0,15***	0,06***	0,07***	0,41***	0,31***
Age child (mean centred)	0,95	0,94	0,85	0,91	0,98	0,90
Sex child (ref = girls)	1,06	1,07	2,48*	0,65	0,95	1,24
Educational level mother (ref = high)						
Low	0,96	1,80°	2,76	2,79	0,94	1,50
Medium	0,88	1,63*	0,69	3,72*	0,94	1,23
Educational level father (ref = high)						
Low	0,87	0,51°	0,62	0,44	0,87	0,46*
Medium	1,38	0,49**	1,47	0,39	1,32	0,44**
Participation parents (ref = mother and father)						
Father only	0,86	2,45**	1,13	13,41**	0,82	1,56
Mother only	0,63*	1,61	3,88**	7,35***	0,46**	0,81
Father and mother	1,31	0,80	0,46	1,56	1,45	0,52
Dissolved marriage (ref = intact marriage)	2,72***	1,07				
Parental conflict	1,00	1,11	1,34	1,02	0,97	1,02
Open communication with child (mother)	0.68***	0.86	0.51*	0.70	0.69	0,85
Negative communication with child (mother)	0.66***	0.97	0.72	1.21	0.61	0,83
Open communication with child (father)	0.82*	0.76°	0.68	1.11	0.85	0,69*
Negative communication with child (father)	0.71	0.95	0.59	0,779	0.75	1.20
Parents no contact					0,95	0,95
Year of divorce (mean centred)					1,04	0,92*
Residence child (ref = with mother)						
Shared residence					0,84	0,81
With father only					0,78	0,97
N	1130	728	254	225	847	494
-2LL	1089.8	601.9	150.4	142.6	873.1	423.4

Source: Divorce in Flanders, authors' calculations; °p<0.10; *p<0.05; **p<0.01; ***p<0.001.

Within intact marriages, more frequent open communication with mother is associated with a lower likelihood of parental refusal. Within dissolved marriages, more frequent open communication with father is associated with a higher likelihood of the child participating in the study after parental permission.

The age of the child, the frequency of parental conflict, parents no longer having contact and the residence of the child in case of parental divorce are not associated with neither parental nor child refusal. Children of more recent divorces are less likely to refuse to participate in the study.

4.3 The likelihood of parents to be present during the child interview

During 170 (27%) of the child interviews at least one of the parents was present. Table 11 presents the results for the multivariate analysis modelling the likelihood of parental presence. The model including all marriages shows that parents of dissolved marriages are less likely to be present during the child interview than parents of intact marriages.

In the three samples, parents are less likely to be present during the interview for older children. The sex of the child is not related to parental presence. Medium educated fathers are more likely to be present than high educated fathers within the group of divorced marriages.

For intact marriages, parental presence is more likely in case the father participated first than in case the mother participated first. For dissolved marriages, parental presence is more likely in case only mother participated in the study.

Parental conflict is negatively related to parental presence in the three models. More frequent negative communication with mother is associated with a lower likelihood of parental presence within intact marriages. The year of divorce and residence of the child following divorce is not related to the likelihood of parents being present during the child interview.

Table 11 Odds ratio's from logistic regression models predicting the presence of parents during the child interview

Exp(B)	All marriages	Intact marriages	Dissolved marriages
Intercept	0.26***	0.26***	0.12***
Age child (mean centred)	0.81***	0.76**	0.83**
Sex child (ref = girls)	0.85	1.12	0.67
Educational level mother (ref = high)			
Low	1.88*	1.23	1.92
Medium	1.37	1.41	1.37
Educational level father (ref = high)			
Low	1.15	1.20	1.32
Medium	1.83*	1.72	2.21*
Participation parents (ref = mother and father)			
Father only	0.92	0.77	1.29
Mother only	1.74*	1.73	2.20*
Father and mother	0.71	0.40*	1.33
Dissolved marriage (ref = intact marriage)	0.63*		
Parental conflict	0.66**	0.69*	0.62*
Open communication with child (mother)	1,10	0.90	1.18
Negative communication with child (mother)	0,87	0.58*	1.02
Open communication with child (father)	1,01	1.03	1.07
Negative communication with child (father)	0.90	1.23	0.77
Parents no contact			1,41
Year of divorce (mean centred)			1,04
Residence child (ref = with mother)			
Shared residence			0,85
With father only			0,61
N	614	196	410
-2LL	653.8	207.2	424.5

Source: Divorce in Flanders, authors' calculations
°p<0.10; *p<0.05; **p<0.01; ***p<0.001.

4.4 Differences in child reports according to presence of parent

Table 12 presents the multivariate results for differences in child reports on the frequency of parental conflict according to the presence of a parent. In both subsamples, the explained variance is very low.

Within the sample of intact marriages, we find no significant effects at all. Within the sample of dissolved marriages, we find a statistical weak indication ($p<.10$) of children reporting less parental conflict in case a parent was present during the interview. Children from recent divorces report more frequent parental conflict than children from less recent divorces. Finally, children report less frequent parental conflict in case only mother participated in the study.

Table 13 and 14 present the results for the children's report on their communication with mother and father. We see that children of intact marriages report more frequent open communication with mother if a parent was present during the interview. In the other models, we find no significant differences in the reported communication according to the presence of a parent.

With regard to the control variables, we see that older children report less frequent open communication with mother and father than younger children, and more frequent negative communication. The latter only holds for children from dissolved marriages.
Boys from dissolved marriages report more frequent open communication.

Table 12 Unstandardized coefficients and standard errors from the OLS-regression models predicting the frequency of parental conflict reported by the child

	Intact marriages		Dissolved marriages	
	B	**S.E.**	**B**	S.E.
Intercept	-0,07	0,14	-0,15	0,13
Age child (mean centred)	0,02	0,03	0,01	0,02
Sex child (ref = girls)	0,01	0,13	-0,05	0,08
Educational level mother (ref = high)				
Low	-0,31	0,29	-0,10	0,14
Medium	0,06	0,15	0,12	0,10
Educational level father (ref = high)				
Low	0,32	0,22	-0,02	0,13
Medium	0,08	0,15	0,23	0,11*
Participation parents (ref = mother and father)				
Father only	-0,13	0,41	-0,17	0,15
Mother only	0,15	0,22	-0,27	0,11*
Father and mother	-0,05	0,14	-0,02	0,13
Year of divorce (mean centred)			0,04	0,01***
Residence child (ref = with mother)				
Shared residence			-0,06	0,10
With father only			-0,11	0,19
Parent(s) present during IV	-0,12	0,15	-0,16	0,10°
N	196		409	
R^2	.03		.08	

Source: Divorce in Flanders, authors' calculations
°p<0.10; *p<0.05; **p<0.01; ***p<0.001.

Table 13 Unstandardized coefficients and standard errors from the OLS-regression models predicting possitive comuniation with mother and father reported by the child

	Intact marriages				Dissolved marriages			
	OC with father		OC with mother		OC with father		OC with mother	
	B	**S.E.**	**B**	**S.E.**	**B**	**S.E.**	**B**	**S.E.**
Intercept	0,12	0,14	0,09	0,12	-0,45	0,17*	-0,36	0,15*
Age child (mean centred)	-0,06	0,03*	-0,07	0,03**	-0,12	0,03***	-0,12	0,02***
Sex child (ref = girls)	0,10	0,13	-0,11	0,11	0,29	0,11**	-0,02	0,09
Educational level mother (ref = high)								
Low	-0,23	0,29	0,20	0,25	-0,06	0,18	0,22	0,15
Medium	-0,17	0,15	0,15	0,13	-0,08	0,13	0,18	0,11
Educational level father (ref = high)								
Low	-0,32	0,22	-0,34	0,19	0,08	0,17	-0,13	0,14
Medium	-0,40	0,15**	-0,42	0,13**	-0,17	0,14	-0,13	0,12
Participation parents (ref = mother and father)								
Father only	-0,28	0,41	-0,28	0,36	0,10	0,20	-0,27	0,17
Mother only	0,10	0,22	-0,20	0,19	-0,11	0,14	0,25	0,12*
Father and mother	-0,06	0,14	-0,19	0,12	-0,28	0,17	-0,02	0,14
Parent(s) present during IV	0,05	0,15	0,26	0,13*	0,02	0,13	0,11	0,11
Year of divorce (mean centred)					-0,03	0,02*	-0,02	0,01
Residence child (ref = with mother)								
Shared residence					0,26	0,13*	0,25	0,11*
With father only					1,06	0,25***	0,01	0,21
N	196		196		409		409	
R^2	.12		.15		.12		.13	

Source: Divorce in Flanders, authors' calculations
°p<0.10; *p<0.05; **p<0.01; ***p<0.001.

Table 14 Unstandardized coefficients and standard errors from the OLS-regression models predicting negative communication with mother and father reported by the child

	Intact marriages				Dissolved marriages			
	NC with father		NC with mother		NC with father		NC with mother	
	B	S.E.	B	S.E.	B	S.E.	B	S.E.
Intercept	-0,16	0,09°	-0,31	0,12*	-0,08	0,10	0,25	0,15°
Age child (mean centred)	0,00	0,02	0,00	0,03	0,04	0,01**	0,08	0,02**
Sex child (ref = girls)	0,02	0,09	0,10	0,11	-0,04	0,06	-0,04	0,09
Educational level mother (ref = high)								
Low	-0,05	0,19	-0,52	0,26*	-0,09	0,10	-0,27	0,16°
Medium	0,09	0,10	-0,09	0,13	0,06	0,07	-0,14	0,11
Educational level father (ref = high)								
Low	0,26	0,15°	0,48	0,20*	-0,04	0,09	0,12	0,15
Medium	0,14	0,10	0,33	0,13*	0,13	0,08°	0,13	0,12
Participation parents (ref = mother and father)								
Father only	-0,09	0,27	-0,02	0,36	-0,15	0,11	-0,07	0,17
Mother only	-0,16	0,15	0,09	0,20	0,04	0,08	-0,39	0,12**
Father and mother	-0,04	0,09	0,11	0,12	0,15	0,09	-0,19	0,14
Parent(s) present during IV	0,12	0,10	-0,14	0,13	0,11	0,07	0,03	0,11
Year of divorce (mean centred)					0,02	0,01*	0,02	0,01°
Residence child (ref = with mother)								
Shared residence					0,00	0,07	-0,19	0,11°
With father only					-0,40	0,14**	-0,18	0,21
N	196		196		409		409	
R^2	.05		.08		.09		.07	

Source: Divorce in Flanders, authors' calculations
°p<0.10; *p<0.05; **p<0.01; ***p<0.001.

5. Discussion

This study investigated three challenges of questioning children about their family relationships: the selection bias in parent and child consent, the measurement equivalence of latent concepts between parents and children, and the effect of parental presence during the interview on children's reports.

Divorced parents more frequently decline the participation of their children compared to married parents. The educational level of the parents is not related to the consent of parents to contact the child. Children with a lower educated mother more often decline to participate, while children with a lower educated father are more likely to participate in the study. Finally, children less often decline to participate in case their parents divorced more recently. Together, these findings reflect an important selection bias into the research sample and demonstrate the importance of empirically testing the consequence of this on the estimated models (Kalmijn & Liefbroer 2011). Especially if one wants to investigate the consequences of divorce for children, this selection bias can have some strong implications. As divorced parents are less inclined to let their child participate in the study, it is very likely that only children with less negative outcomes are present in the study. The lower presence of children from recent divorces is an indication of this, as studies have shown that children are especially vulnerable for negative divorce-related outcomes in the two years after the dissolution ('crisis model') (Lansford, 2009).

Secondly, the results show scalar equivalence between children, fathers and mother in measuring parental conflict, openness in communication between parent and child, and negative communication between parent and child. This suggests that children between 10 and 17 years are capable of answering survey questions regarding their family relationships in a similar manner as adults. Moreover, as we find significant differences between the reports by respectively children, fathers and mothers, questioning children provides an additional perspective on family life. Further studies are needed to understand the causes and underling mechanisms of the reported differences. An important question in this regard is to what extent different reports are the reflection of different perceptions, expectations and evaluations of the same relationship, or whether they origin from actor-specific processes of social desirability.

Third, children report less frequent parental conflict and more frequent open communication with mother in case a parent was present during the interview. Although these findings might be a reflection of social desirability, they might also reflect a certain selectivity of parents who are present during the interview. The latter argument is supported by the finding that divorced parents and parents with frequent conflict are less frequently present during the child interview.

Overall, our results demonstrate the strength of multi-actor data including the perspective of different family members. As the results of this study indicate that children are able to give reliable answers to questions on family processes, their perspective may richen our insights on contemporary family dynamics. Nevertheless, the juridical demands for questioning children can provide some challenges to research with regard to parental selection in the sample. Getting more insight in this selection and methods to correct for this, are crucial in order to get a better picture of the family experiences of all children, and not only those who are faring well.

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Appendix 1. Descriptive values of child and parent characteristics

	Intact marriages	Dissolved marriages
Child characteristics		
Age child (mean, SD)	13.53 (2.31)	13.78 (2.20)
Sex child (%)		
Boys	46	51
Girls	54	49
Residence child (%)		
With mother only		58
Shared residence		36
With father only		6
Parent characteristics		
Educational level mother (%)		
Low	7	18
Medium	38	45
High	55	37
Educational level father (%)		
Low	12	23
Medium	42	47
High	46	30
Participation parents (%)		
Father only	4	27
Mother only	16	39
Both parents participated	80	34

Source: Divorce in Flanders. Notes: N mothers = 900, N fathers = 759, N children = 622.