

ORIGINAL ARTICLE

Psychological complaints among children in joint physical custody and other family types: Considering parental factors

EMMA FRANSSON¹, JANI TURUNEN², ANDERS HJERN^{1,3}, VIVECA ÖSTBERG¹ & MALIN BERGSTRÖM¹

¹Centre for Health Equity Studies (CHESS), Stockholm University & Karolinska Institutet, Stockholm, Sweden, ²Department of Sociology, Demography unit, Stockholm University, Stockholm, Sweden, and ³Clinical Epidemiology, Department of Medicine, Karolinska Institutet, Stockholm, Sweden

Abstract

Aims: Increasing proportions of Scandinavian children and children in other Western countries live in joint physical custody, moving between parents' homes when parents live apart. Children and parents in non-intact families are at risk of worse mental health. The potential influence of parental ill-health on child well-being in the context of differing living arrangements has not been studied thoroughly. This study investigates the psychological complaints of children in joint physical custody in comparison to children in sole parental care and nuclear families, while controlling for socioeconomic differences and parental ill-health. **Methods:** Data were obtained from Statistics Sweden's yearly Survey of Living Conditions 2007–2011 and child supplements with children 10–18 years, living in households of adult participants. Children in joint physical custody ($n=391$) were compared with children in sole parental care ($n=654$) and children in nuclear families ($n=3,639$), using a scale of psychological complaints as the outcome measure. **Results:** Multiple regression modelling showed that children in joint physical custody did not report higher levels of psychological complaints than those in nuclear families, while children in sole parental care reported elevated levels of complaints compared with those in joint physical custody. Adding socioeconomic variables and parental ill-health only marginally attenuated the coefficients for the living arrangement groups. Low parental education and parental worry/anxiety were however associated with higher levels of psychological complaints. **Conclusions:** **Psychological complaints were lower among adolescents in joint physical custody than in adolescents in sole parental care. The difference was not explained by parental ill-health or socioeconomic variables.**

Key Words: Divorce, child custody, mental health, socioeconomic factors, shared residence, parenting, family types

Introduction

Parental split-up due to divorce or cohabitation dissolution is common in Scandinavian countries and in other Western countries. In Sweden, more than 30% of older adolescents have experienced parental dissolution [1]. Negative effects of parental separation on child well-being have been well documented. In general, children with divorced parents face increased risks of social maladjustment and ill-health compared with those in intact families [2–4]. Factors such as parental conflict [5] and loss of economic resources

[6] are suggested to contribute to the lower well-being of children whose parents live apart. However, children's living arrangements after separation could also impact on their well-being.

Previously, parental split-up has often implicated that children lose contact with one parent, most often the father [7]. Although this might still be the case for numerous children, increasing numbers of fathers are keeping contact with and responsibility for children when living apart from the mother. The reasons for

Correspondence: Emma Fransson, Centre for Health Equity Studies (CHESS), Stockholm University/Karolinska Institutet, 106 91 Stockholm, Sweden.
E-mail: emma.fransson@ki.se

(Accepted 5 October 2015)

© 2015 the Nordic Societies of Public Health



fathers' increased involvement in post-divorce child rearing may possibly be increased gender equity in the parental roles, rise of women in paid employment and alterations in the family law systems [8]. Sweden has had a long tradition of family policy and family law that implies a symmetrical family model with both mothers and fathers engaging in paid work as well as in child rearing. Accordingly, Swedish parents most often continue to share the *legal* custody of the children also after a divorce [9]. The *physical* custody, i.e. with whom the child lives after family split-up, has traditionally been with the mother, as in most countries [8, 9]. However, during the last 30 years joint physical custody where children alter their residence between the parents' homes has largely increased to concern the majority of children of separated parents in Sweden in 2010 [1]. Furthermore, Swedish children who live with only one parent, still have frequent contact with the other parent [10].

Previous Swedish studies that have investigated the health and well-being of school children and adolescents in joint physical custody have shown conflicting results regarding the difference in health outcomes between adolescents in joint physical custody and in nuclear families, most have reported the best health outcomes being in the nuclear group [10–14]. More interesting, a few studies found differences in well-being and psychosomatic health complaints between joint physical custody and adolescents living with only one parent, with better outcomes for those in joint physical custody [10,11,14]. The differences in health between adolescents in joint physical custody and in sole parental care might be partly explained by structural socioeconomic differences as parents practicing joint physical custody have been described to have a more favourable socioeconomic situation than parents with sole parental care [15]. Joint physical custody has been suggested as more common among relatively well-educated parents [15], and parental couples with good communication and few conflicts are suggested to more often end up with joint physical custody than sole custody [16]. However, many previous studies on child outcomes in different living arrangements have failed to adjust for socioeconomic factors. Although one longitudinal study indicates that the socioeconomic differences between parents with joint physical custody and sole parental care become less as joint physical custody becomes more common [17], recent research still suggests that parental health and well-being could differ between parents with joint and sole care [12].

Losing contact with children or becoming a sole parent both seem to increase the risk for ill-health in adults after divorce [18,19]. Research on how family dissolution impacts on adults has also focused on

positive outcomes, such as female emancipation or the end of abusive or aggressive relationships [7]. Furthermore, parents who split up could differ initially from parents who stay together, as suggested in social selection theory [20]. While parents in general have mainly a positive influence on their children's development [21], both maternal and paternal mental ill-health is associated with an increased risk of emotional, behavioural and cognitive problems in children [22]. Children whose parents suffer from mental ill-health could inherit a vulnerable disposition or suffer from exposure to negative affect and behaviours as well as to increased stress [23]. In sum, children are shown to be vulnerable to parental dissolution as well as to parental ill-health; however, the influence of parental ill-health and well-being on child mental health in the context of differing living arrangements has not been studied thoroughly. Therefore, the aim of this study was to investigate children's psychological complaints in joint physical custody in comparison to children in sole parental care and in nuclear families while controlling for socioeconomic differences as well as for differences in parental ill-health.

Methods

Data were obtained from Statistics Sweden's yearly Survey of Living Conditions (ULF), collected in the years 2007–2011. The participants in the ULF survey are selected using a stratified, independent random sample of adult individuals from the Swedish Total Population Register. The survey includes child supplements with data from 5280 children aged 10–18 years, living at least half the time in the households of adult participants. The rate of non-responding children was between 26–37.2% during the years 2007–2011. For the purpose of this study, selected data from the children and one of the parents was used. The analytic sample consists of 4684 participants. The study was approved by the local Research and Ethics Committee in Stockholm, Sweden (Dnr 2012/1184–31/5).

Variables

Living arrangements and socio demographics. The categories were based on parents' answers in the survey about the child's residency. If the child lived less than half the time with the adult participant, the child was not included in the survey. For included children, the parental question regarding residency was 'Does the child live with you all the time or part of the time' with the response alternatives 'all or nearly all the time' or 'part of the time'. If the parent answered

'part of the time', new response alternatives were 'half the time "joint physical custody"' or 'more than half of the time'. The categories used in the analyses are *Nuclear family*: children who live in one home with both their parents; *half the time "joint physical custody"*: children who live approximately half the time in each parent's home; and *Only with one parent*: children who live only in one home with their mother or their father. For the purpose of this study children living more than half of the time ($n=84$) were excluded as well as adopted children ($n=40$), children in foster care ($n=12$) children with unknown parental care ($n=17$) participants with missing data ($n=131$) and with a step-parent as the answering adult ($n=312$).

The parents' national origin was obtained from the Register of the Total Population and coded as Swedish background or non-Swedish background, with the latter group being born outside Sweden or having two non-Swedish parents.

Children's psychological complaints. An index based on questions regarding internalizing/emotional as well as externalizing/behavioural symptoms was used as the outcome measure. The measure was expected to capture ill-health in both girls and boys [24]. Participating children were asked to judge the following statements regarding psychological symptoms: 'I am often tense and nervous', 'I have a hard time being still and concentrating', 'I often feel sad or down', 'I get angry very easily', 'I am often grouchy or irritated'. The response alternatives (1–4) were Matches Exactly/Roughly/Poorly/Not at all.

Socioeconomic variables. Data on socioeconomics were derived from the adult ULF survey. Parental level of education was divided in three categories where low level of education equals any level less than 3 years of senior high school. Medium level of education equals 3 years of high school but less than 3 years of graduate school. High level of education equals at least three years of graduate school.

A low-income index, calculated by Statistics Sweden was used, showing if the household's disposable income was below the national welfare payment standard.

Parents were also asked to state if they had a cohabiting partner, and the information was used for separate comparisons on the non-nuclear groups.

Parental ill-health. In the adult ULF survey, parents were asked 'Are you bothered by worry or anxiety?' with the response options no/yes, somewhat bothered/yes, very bothered. For the analyses, the variable was categorized as bothered (somewhat bothered/yes, very bothered)/not bothered.

Parents were also asked to rate their self-rated health, a well-used single item question, shown to be an independent predictor of future mortality [25]: How would you rate your overall health? Is it very good/good/fairly well/bad/ very bad? The answers were coded as good/less than good.

Statistical analyses

A principal component analysis was performed to extract the psychological complaints scale using SPSS 22. An examination of the factor loadings after Varimax rotation showed a negative symptoms factor including the five items in the outcome measure. A scale based on the five questions was computed using the Alpha command in Stata 13 and used as the outcome measure with a range of 1–4 (Cronbach's alpha = .66). (Cronbach alpha for boys=.64; girls=.67).

Multiple regressions were computed in steps with psychological complaints as the outcome and living arrangement as the exposure variable. In order to enable comparisons between the joint physical custody group and the other groups, joint physical custody was chosen as the reference category. Model 1 adjusts for child demographic variables (gender, age and national origin). Model 2 also adjusts for socioeconomic factors (the responding parent's level of education and low household economy). In model 3, parental health variables (the responding parent's worry/anxiety and self-rated health) were included while also controlling for this parent's gender as well as the variables from model 1. In model 4, all the above listed variables were included. All models were adjusted for survey year 2007–2011 and family clustering, i.e. that some observations come from siblings living in the same households. The number of independent observations was 3333.

Separate analyses were conducted for the post separation living arrangement groups with regard to the presence of a step parent in the household or not.

The interaction term child's gender \times living arrangements was tested but non-significant. Thus, we decided to use gender as a covariate in the analyses and not perform gender specific analyses.

Results

Of the included children, 391 children were in joint physical custody, 3639 in nuclear families and 654 lived only with one parent (111 in father care and 543 in mother care). Table I shows the proportions of children with different background characteristics and socioeconomics in relation to living arrangements. The composition of children in joint physical custody is similar to that of children in nuclear

Table I. Descriptive data for participating children in different living arrangements, $N=4684$.

	Nuclear, $n=3639$	Joint physical custody, $n=391$	Only with one parent, $n=654$
Background	%	%	%
<i>Gender</i>			
Girls	50.9	46.5	53.5
Boys	49.1	53.5	46.5
<i>Age</i>			
10–12	32.8	31.7	21.7
13–15	34.7	37.6	32.3
16–18	32.5	30.7	46.0
<i>National origin</i>			
Swedish	82.4	89.8	81.2
Other	17.6	10.2	18.8
Socioeconomics			
<i>Parent's level of education</i>			
High	26.6	23.0	17.9
Medium	34.4	37.3	36.1
Low	39.0	39.6	46.0
<i>Household economy</i>			
Above low level	84.3	82.6	78.4
Low level	15.7	17.4	21.6

Table II. Proportions of children in different living arrangement groups with mothers or fathers reporting worry/anxiety and self-rated health less than good.

	Nuclear		Joint physical custody		Only with one parent	
	Mothers, $n=1901$	Fathers, $n=1738$	Mothers, $n=205$	Fathers, $n=186$	Mothers, $n=543$	Fathers, $n=111$
Parental health						
Suffering from worry/ anxiety (%)	19.9	10.0	39.0	17.7	30.9	16.2
Self-rated health, less than good (%)	15.1	11.2	18.0	8.6	23.0	17.1

families, although a somewhat higher share had a Swedish background. The composition of children in sole parental care deviates from the other groups both regarding a higher age and a more disadvantaged socioeconomic situation. Furthermore, in the sole care group 44% of the children had a step-parent and as for the joint physical custody group 42% of the children had a step-parent in the answering parent's household (not shown in the table). Table II shows parental health variables in relation to child living arrangements.

The total mean of the outcome measure was 1.87 and the standard deviation (SD) was .56. The cut-off for the highest quintile was 2.4. The mean for the joint physical custody group was 1.85, $SD=.54$. The mean for the sole group was 1.99, $SD=.62$ whereas the mean for the nuclear group was 1.85, $SD=.54$ (data not presented in table).

Table III presents proportions of participants reporting psychological symptoms in the highest quintile with regard to background variables and covariates. Adolescents in sole parental care most often reported high psychological complaints in terms of proportions in the highest quintile (28.4%),

whereas adolescents in joint physical custody and in nuclear families were comparable with lower proportions (20.2% and 18.9% respectively).

Table IV summarizes the measures for the multiple regression modelling. It shows that children in joint physical custody did not report more psychological complaints, compared with children in nuclear families. Children in sole parental care had higher levels of psychological complaints, compared with children in joint physical custody. Adding socioeconomic variables (model 2), parental ill-health (model 3) or all together (model 4) did hardly affect the coefficients for the living arrangement groups. In all models, girls had higher levels of psychological complaints compared with boys, and older adolescents had higher levels compared with younger. Low parental education and parental worry/anxiety were associated with more psychological complaints for children. R^2 for the final model was .03. The calculated effect size (Cohen's d) for the difference between joint physical custody and sole parental care = .24.

Separate regression modelling was conducted with the joint physical custody and sole parental care groups ($n=1045$) when adjusting for having a step-parent in

Table III. Proportions of children, $N=4684$, in the highest quintile of psychological complaints by living arrangements and child and family characteristics.

	High level of complaints (Q5)
Living arrangements	%
Nuclear family	18.9
Joint physical custody	20.2
Only with one parent	28.4
<i>Gender</i>	
Boys	17.9
Girls	22.6
<i>Age</i>	
10–12	18.4
13–15	19.3
16–18	23.1
<i>National origin</i>	
Swedish	19.8
Other	22.6
Socioeconomics	
<i>Parent's level of education</i>	
Low	23.5
Medium	17.9
High	18.5
<i>Household economy</i>	
Above low level	20.3
Low level	20.0
<i>Number of adults in the household</i>	
One parent household	25.1
Nuclear family/parent and step-parent	19.6
Parental health	
<i>Worry/anxiety</i>	
No worry/anxiety	19.3
Yes, suffering from worry/anxiety	24.7
<i>Self-rated health</i>	
Good	19.5
Less than good	25.2

the household, together with all variables in model 4 (data not shown). Having a step-parent was not associated with psychological complaints ($\beta = .012$; $p = .756$) and adjusting for step-parents did not affect the estimates for the sole parental care group ($\beta = .110$, $p = .010$).

Discussion

Investigating children and adolescents' psychological complaints in relation to living arrangements, the present findings show higher levels of complaints among young in sole parental custody than those in joint physical custody. In this study, no difference in psychological complaints was found for youth in joint physical custody compared with those in nuclear families. The findings are somewhat at odds with previous findings that children in joint physical custody have worse well-being than children in intact families [10–14].

The proportions of parents suffering from worry were higher in both the non-intact family groups. A similar tendency was found also regarding self-rated health among mothers. As parental ill-health is known to be a risk factor for ill-health in children, child outcomes could have been expected to be worse in both post separation groups. However, such an assumption was not confirmed. Only, children and youth in sole parental care report higher level of complaints than the joint physical custody group, in line with previous findings [10,11,14]. The excess reporting in the sole group was however not explained by parental health.

The differences between the groups were rather stable across the statistical models in this study, indicating that the difference is explained through factors not included here. One hypothesis is that joint physical custody implies moderating factors for psychological ill-health in youth of parents living apart, such as a buffering effect from having regular contact with both parents and a larger social network. Children in joint physical custody have previously been shown to be more prone to turn to both their parents when needing emotional support than children in other living arrangements with parents living apart [14]. Furthermore, living with one parent suffering from anxiety might be moderated through having a parent with higher well-being half of the time; however, we lacked information on ill-health regarding "the other parent" in post-separation living arrangements.

Sodermans et al. [17] suggested that when joint physical custody becomes more common, the families with joint physical custody are also becoming more diverse regarding socioeconomic status. In the current study, parents with sole care were more disadvantaged than the other groups. In speculation, when joint physical custody becomes more frequent, the children in sole parental care might also become an even more marginalized group. In the Swedish context, where joint physical custody is about to become the norm after parental dissolution [1], children in sole parental care could potentially be in sole care mainly due to negative reasons, such as physical or mental ill-health in 'the other' parent or other poor social circumstances, associated with further increased risk of poor health outcomes. Similar to the theory about a selection effect of who is divorcing or not [26], there could be a stronger selection effect of which children end up in joint physical custody or in sole parental care. In our study, we found no effect of having two adults in the non-nuclear households. Such effects have been reported previously, however, both positive and negative [27].

Table IV. Regression analyses modelling children's psychological complaints by different living arrangements, N=4684.

	Model 1 ^a		Model 2 ^a		Model 3 ^a		Model 4 ^a	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Living arrangements								
Joint physical custody	Ref		Ref		Ref		Ref	
Only with one parent	.120	.002	.120	.002	.120	.003	.110	.004
Nuclear family	-.011	.727	-.010	.746	.000	.996	.000	.997
Demographics								
<i>Gender</i>								
Boy	Ref		Ref		Ref		Ref	
Girl	.086	.000	.085	.000	.086	.000	.085	.000
<i>Age groups</i>								
10–12	-.010	.622	-.008	.671	-.008	.671	-.007	.719
13–15	Ref		Ref		Ref		Ref	
16–18	.052	.007	.050	.010	.054	.006	.052	.008
<i>National origin</i>								
Swedish	Ref		Ref		Ref		Ref	
Non-Swedish	.024	.314	.024	.307	.012	.600	.015	.535
Socioeconomics								
<i>Parent's education</i>								
Low			.060	.003			.056	.005
Medium			Ref				Ref	
High			-.013	.538			-.010	.625
<i>Household economy</i>								
Above low level			Ref				Ref	
Low level			.001	.979			.007	.625
Parental variables								
<i>Answering parent</i>								
Father					Ref		Ref	
Mother					.003	.863	.012	.499
<i>Worry/anxiety</i>								
No worry/anxiety					Ref		Ref	
Yes, suffering from worry/anxiety					.071	.004	.068	.006
<i>Self-rated health</i>								
Good/very good					Ref		Ref	
Less than good					.046	.102	.038	.174

^aAll models are adjusted for family clusters and survey year.

Although we find a significant association between living arrangements and psychological complaints, the living arrangements only explain a small share of children's psychological health. Furthermore the effect size of this association is not strong. Using Cohen's [28] rule of thumb the found effect size would be considered weak. Amato [29] has however argued for using a different definition for survey based results than the experimental study designs that Cohen originally based his rule on. Using Amato's definition a *d* of .24 would be regarded as a moderate effect size.

A strength of the study was the possibility to include information provided by both children and parents in the analyses. One limitation was that we lacked a validated measure of parental worry/anxiety and that we instead used the single item. However, this single item measure was associated with the child outcome in all models. Also the self-rated-health item

is widely used and has shown to predict long-term health and ill-health [25]. However, the lack of information regarding time point for parental separations as well as data on how long the child had been in joint physical custody or sole parental care is a drawback and limits the interpretation on mechanisms. In addition, since most information on adults regards only the answering parent this rules out the investigation of the relative impact from each parent. Future studies should preferably include longitudinal data with detailed information on both parents to elucidate the relationship between ill-health and living arrangement for children whose parents live apart.

Conclusions

More children in non-intact families have parents who suffer from worry/anxiety. Multiple regressions of psychological complaints in children, however, did

not show higher levels of complaints in children in joint physical custody compared with those in nuclear families while children in sole parental care showed higher levels of psychological complaints. The differences between joint physical custody and sole parental care was not explained by socioeconomic factors or by parental ill-health. Thus, the results suggest that joint physical custody might counteract the potential negative effects of parental separation.

Acknowledgements

Thanks to Sara Brodin Låftman for advice and support during the work with the database.

Conflict of interest

The Authors declare that there is no conflict of interest.

Funding

E.F. and M.B. were supported from Länsförsäkringsbolagens forskningsfond. The research leading to these results has also received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement no. 320116 for the research project Families And Societies (J.T.).

References

- [1] Swedish Government Official Report. 2011:51 *Fortsatt föräldrar – om ansvar, ekonomi och samarbete för barnets skull*. [Continuous parenthood: About responsibilities, economy and cooperation for the sake of the child]. Statens offentliga utredningar. Stockholm: Fritze; 2011.
- [2] Bjarnason T, Bendtsen P, Arnarsson AM, et al. Life satisfaction among children in different family structures: A comparative study of 36 Western societies. *Child Soc* 2012;26:51–62.
- [3] Breivik K and Olweus D. Children of divorce in a Scandinavian welfare state: Are they less affected than US children? *Scand J Psychol* 2006;47:61–74.
- [4] Sourander A, Niemela S, Santalahti P, et al. Changes in psychiatric problems and service use among 8-year-old children: A 16-year population-based time-trend study. *J Am Acad Child Adolesc Psychiatry* 2008;47:317–27.
- [5] Nielsen L. Shared parenting after divorce: A review of shared residential parenting research. *J Divorce Remarriage* 2011;52:24.
- [6] Lansford JE. Parental divorce and children's adjustment. *Perspect Psychol Sci* 2009;4:140–52.
- [7] Amato PR. The consequences of divorce for adults and children. *J Marriage Family* 2000;62:1269–87.
- [8] Kelly JB. children's living arrangements following separation and Divorce: Insights from empirical and clinical research. *Fam Process* 2007;46:35–52.
- [9] The Swedish Government Offices. *Gemensam vårdnad för ogifta föräldrar* [Joint custody for unmarried parents]. Stockholm: Ministry of Justice, 1999 Contract no.: DS: 1999:57.
- [10] Bergström M, Modin B, Fransson E, et al. Living in two homes—a Swedish national survey of wellbeing in 12 and 15 year olds with joint physical custody. *BMC Public Health* 2013;13:868.
- [11] Bergstrom M, Fransson E, Modin B, et al. Fifty moves a year: Is there an association between joint physical custody and psychosomatic problems in children? *J Epidemiol Commun Health* 2015;69:769–74.
- [12] Bergström M, Fransson E, Hjern A, et al. Mental health in Swedish children living in joint physical custody and their parents' life satisfaction: A cross-sectional study. *Scand J Psychol* 2014;55:433–9.
- [13] Carlsund A, Eriksson U and Sellström E. Shared physical custody after family split-up: Implications for health and well-being in Swedish schoolchildren. *Acta Paediatr* 2013;102:318–23.
- [14] Låftman SB, Bergström M, Modin B, et al. Joint physical custody, turning to parents for emotional support, and subjective health: A study of adolescents in Stockholm, Sweden. *Scand J Public Health* 2014;5:456–62.
- [15] Kitterod RH and Lyngstad J. Characteristics of parents with shared residence and father sole custody. Evidence from Norway 2012. Norway: 2014 June 2014. Report No. 780.
- [16] Spruijt E and Duindam V. Joint physical custody in the Netherlands and the well-being of children. *J Divorce Remarriage* 2009;51:65–82.
- [17] Sodermans AK, Matthijs K and Swicegood G. Characteristics of joint physical custody families in Flanders. *Demogr Res* 2013;28:821–48.
- [18] Weitoft GR, Burström B and Rosen W. Premature mortality among lone fathers and childless men. *Soc Sci Med* 2004;59:1449–59.
- [19] Burstrom B, Whitehead M, Clayton S, et al. Health inequalities between lone and couple mothers and policy under different welfare regimes – The example of Italy, Sweden and Britain. *Soc Sci Med* 2010;70:912–20.
- [20] Jocklin V, McGue M and Lykken DT. Personality and divorce: A genetic analysis. *J Pers Soc Psychol* 1996;71:288–99.
- [21] Flouri E and Buchanan A. Early father's and mother's involvement and child's later educational outcomes. *Br J Educ Psychol* 2004;74(Pt 2):141–53.
- [22] Gunlicks ML and Weissman MM. Change in child psychopathology with improvement in parental depression: A systematic review. *J Am Acad Child Adolesc Psychiatry* 2008;47:379–89.
- [23] Goodman SH and Gotlib IH. Risk for psychopathology in the children of depressed mothers: a developmental model for understanding mechanisms of transmission. *Psychol Rev* 1999;106:458–90.
- [24] Chaplin TM and Aldao A. Gender differences in emotion expression in children: A meta-analytic review. *Psychol Bull* 2013;139:735–65.
- [25] Fayers PM and Sprangers MAG. Understanding self-rated health. *Lancet* 2002;359:187–8.
- [26] Hope S, Rodgers B and Power C. Marital status transitions and psychological distress: longitudinal evidence from a national population sample. *Psychol Med* 1999;29:381–9.
- [27] Sweeney MM. Remarriage and stepfamilies: Strategic sites for family scholarship in the 21st century. *J Marriage Family* 2010;72:667–84.
- [28] Cohen J. *Statistical Power Analysis for the Behavioral Sciences*. 2nd ed. Hillsdale, NJ: L. Erlbaum Associates; 1988.
- [29] Amato PR. The well-being of children with gay and lesbian parents. *Soc Sci Res* 2012;41:771–4.