

INDIVIDUAL DEVELOPMENT AND ADJUSTMENT

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REPORT NO 68, 1987

REACTIONS TO SEPARATION: SEPARATED CHILDREN'S ADJUSTMENT AT AGE 13

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Rapport 68

September 1987

ISSN 0281-8108

FOREWORD

This report was prepared within the longitudinal project 'Individual Development and Adjustment' (IDA) at the Department of Psychology, University of Stockholm. It was supported by funds from The Swedish Save the Children Foundation, the Bank of Sweden Tercentenary Foundation, and the Swedish Council for Planning and Coordination of Research.

Dr. Lars R. Bergman has borne the main responsibility for the writing of this report, and Bassam El-Khouri, B. A., has actively contributed to the data analyses and to the writing of the report.

This report is the first one in a series of reports dealing with the effects of separation on children's adjustment reactions. It focuses on extrinsic and intrinsic adjustment problems considered individually although later reports will concentrate on the effects of separation on patterns of adjustment problems.



David Magnusson
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ABSTRACT

The importance of separation from a parent is investigated for the development of extrinsic and intrinsic adjustment problems. This is done for a Swedish sample of boys and girls studied between the ages of 10 and 13. Controlling for preexisting differences allowed differential patterns of adjustment to emerge between children who had or had not experienced separation from a parent. With regard to extrinsic development, it was found that, regardless of sex, children who had been subjected to a separation tended to develop problems in school with regard to concentration and motivation. No effect of separation was found for conduct problems, like aggression and motor restlessness. With regard to intrinsic problems, it was found that, regardless of sex, there was a tendency to develop psychosomatic problems. A strong sex difference appeared for the variable low self-esteem: boys from separated homes reacted with a lowered self-esteem and girls from separated homes reacted with a heightened self-esteem.

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INTRODUCTION

One of the oldest and most stable social structures, the nuclear family, is losing mark in many of the developed countries. In recent years, alarming reports have surfaced directing attention to the high rate of separation across countries like Sweden and the USA (Glick & Norton, 1978; Fine, 1987; Statistisk Årsbok, 1986). These separations, usually due to a divorce, often involve children and can result in severe social and psychological strains being put on all members of the family. Our concern here is with the possible effects of separation on the adjustment of the involved child; a concern which is shared by many researcher who point to the importance of separation with regard to the social development and psychic well being of the child (for an overview, see Bowlby, 1951, 1969; Emery, 1982).

Many studies report negative relationships between divorce and various aspects of adjustment, mainly antisocial behavior like aggression and criminality (Glueck & Glueck, 1950; McDermott, 1970; Morrison, 1970; Tuckman & Regan, 1966; Westman, Cline, Kramer, & Swift, 1970; Wotton, 1959). However, according to Rutter (1970) there is no indication that this outgoing behavior is coupled to neurotic disturbances in the child. Other researchers found relations between divorce and different kinds of intrinsic problems like self-centeredness and social estrangement (Fry & Scher, 1984). It is important to point out that the above said does not apply to separation due to other causes than divorce, for instance, when the separation was caused by the death of a parent, Douglas, Ross, and Simpson (1968) found no increase in the rate of criminality.

However, it is not clear that a divorce always has a negative effect on the child's adjustment; some studies have shown a lack of relationship or even a positive one between divorce and adjustment. For instance, Slater, Stewart, and Linn (1983) found that boys from disrupted homes had more positive self-concepts and more positive perceptions of their family environment than those from intact families while for girls the reverse was true. On the other hand, Wiehe (1985) noted, for divorce children of 9 to 14 years of age, a lower self-esteem and poorer social and academic adjustment and more negative attitudes toward their parents

than their counterparts from intact families. Some findings also point to the fact that variables like self-concept, reading achievement, withdrawal, peer relations, and mathematics achievement do not differentiate between children of intact and divorced families (Hammond, 1981).

The contradictory results discussed above highlight the methodological problems that complicate research in this field. For instance, Emery (1982) points to the importance of considering such factors as age, sex, kind of separation, and kind of adjustment problem studied. In some studies children of different ages are included without controlling for age in the analyses and to the extent that age influences the results, different results will be obtained depending on the age composition of the sample under study.

Partly due to differing empirical results, which in our opinion sometimes may depend on inadequate methodologies, and partly due to different basic theoretical paradigms, a number of researchers have proposed theories for explaining the mechanisms that govern the child's adjustment after the divorce. For instance, the *maternal deprivation hypothesis* proposed by Bowlby (1969) led him to conclude that the loss of an attachment figure always results in anxiety. To summarize, Bowlby stressed the importance of a warm and steady relationship between the mother and the child for the latter's psychic wellbeing. This conclusion was a matter of debate (e.g., Casler, 1961; O'Connor, 1968; Yarrow, 1961) which emphasized that the effects of separation depends on many situational factors: the loss of a mother or a father or both, the type of separation involved, i.e., the death of a parent or divorce, the length in time of the separation period and the developmental phase in which the child is. Another model, focusing on *modeling* phenomena, incorporates a variety of post hoc explanations of the child's adjustment by emphasizing the modeling behavior that the child exhibits in response to divorce. Emery (1982) concluded that the "modeling hypotheses may ... explain the sex differences in children's separation and life-change responses to different custody arrangements" (p. 321). A third widely discussed model emphasizes the *alteration in discipline practice*. Divorced parents tend to become more loose with their children after the divorce. As a consequence children of divorce are less compliant with their parents

than children from intact homes. Hetherington (1976) revealed that divorced parents made fewer maturity demands, had poorer communication and were less affectionate and more inconsistent with their children than did parents from intact homes.

Bayley (1966) suggested that boys, as compared to girls, are more vulnerable in their development, when they experience environmental stress, especially with regard to intelligence. She stressed genetic differences as the main etiological factors. Bergman (1981) confirmed to a certain extent this hypothesis when he studied the effects of a change in the nuclear family between the age of 10 and 13. However, as Kamin (1978) concluded, the causes for these observed effects are not clear.

What is a paramount question to us when trying to elucidate the effects of separation on adjustment is how the investigation should be designed in order to permit some causal inferences. It is well known that this is very difficult in nonexperimental settings (Cook & Campbell, 1979) and there are great difficulties in interpreting, for instance, mean differences in adjustment between a group of divorce children and a control group. To do this one has to rule out the possibility that the differences were caused by other factors than the divorce. For instance there may exist differences between the groups that were present already before the divorce and which provide alternative explanations of the results. It is then useful to have access to longitudinal data where it is possible to control for preexisting differences between the divorce group and the control group. For a further discussion of this matter the reader is referred to Bergman (1981).

In the present investigation, the importance of separation for children's school adjustment is studied using a longitudinal design where a group of children of homogeneous age are followed over three years with measurements taken before and after the separation. The focus is on the effects of the separation on the children's extrinsic adjustment (i.e. out-directed, e.g. conduct problems) and intrinsic adjustment (i.e. in-directed, e.g. experiencing dissatisfaction with school).

Reviewing the literature, Emery (1982) concluded that neither abnormal child psychology nor the field of studying marital relations has

succeeded in producing an adequate classification system by which one could judge the divorce child's adjustment. However, we believe that the taxonomy for classifying children's adjustment problems, which was developed by Bergman and Magnusson (1983, 1984) within the context of developmental psychology, can be used here. This taxonomy incorporates many indicators that are established in the context of studying children of divorce e.g. peer relations, distractibility, aggressiveness, hyperactivity, anxiety, self-concept, etc. (Hammond, 1981; Kurdek, Blysk, & Siesky, 1979). Within this taxonomy, the above mentioned distinction between extrinsic and intrinsic problems is central and in the present study a number of indicators from each main category is included. Although not all relevant aspects can be covered, it is our goal to study a sufficiently broad picture of adjustment problems to enable conclusions about the relative importance of separation for different aspects of adjustment and this for a sample that is homogeneous with regard to age and where possible sex differences are taken into account.

METHOD

Population, sample and independent variables

Data were taken from the longitudinal project Individual Development and Adjustment (Magnusson, 1987). The population is defined as all children living in a mid-Swedish town of 100.000 inhabitants and attending the third grade in 1965 (special classes for children with learning difficulties were not included). The subjects were about 10 years old when they were in grade 3. The initial sample consists of all children for whom information about family structure are available both at age 10 and at age 13. The size of the population, the initial sample and the dropout are shown in Table 1.

Table 1. Population and initial sample.

	Population	Sample	Dropout
Boys	476	440	36
Girls	494	433	61

The major cause for dropout was found to be migration, which can be expected as one considers the longitudinal nature of this study. Based on the initial sample, two groups were constructed such that children from unbroken homes at both age 10 and 13 constituted one group (Intact Family) and children from unbroken homes at age 10 but living with only the mother at age 13 constituted the other group (Separated Family). Table 2 shows the sample sizes for these groups. Children in the initial sample who did not belong to any of these two groups were discarded.

Table 2. Sample sizes for the investigation groups.

	Intact Family	Separated Family	Total
Boys	380	11	391
Girls	381	10	391

A certain partial dropout in specific analyses also occurred, varying between 0 and 8 % for both sexes. It is worth noting that in most cases a partial dropout can be observed only for the Intact Family group. *Sex* and *Family structure* (belonging to group Intact Family or group Separated Family) thus constituted the two independent variables. The dependent variables and the control variables are described below.

Dependent variables and control variables

Extrinsic and intrinsic adjustment problems are considered for each sex in this study. *Extrinsic* problems were studied using the following variables: Motor Restlessness, Aggression, Lack of concentration, Low School Motivation, Poor Peer Relations. The *intrinsic* problems were studied using the following variables: Doesn't Like School Generally, Psychosomatic Reactions, Low Self Esteem, Feelings of Low Peer Status, Disharmony, Overambition. Table 3 summarizes information about the indicators. Measures were taken at two ages, namely age 10 and age 13. For a complete discussion of the decision to include these variables in intrinsic and extrinsic adjustment problems, see Bergman and Magnusson (1983, 1984).

In Table 3, the method is given by which data were gathered. In all of the cases where teachers' ratings were involved, a child was rated by the teacher on a seven point scale with the rest of the

same-sexed children in the class as the reference group (if their class was reasonably normal; otherwise an adjustment of the ratings was indicated). Because of the nature of this procedure, any sex differences that might be present would tend to be underestimated.

Table 3. Indicators of adjustment problems used as dependent variables or control variables.

Adjustment problem	Source of data
<i>Extrinsic problems</i>	
Motor Restlessness	Teacher's ratings on a seven points scale
Aggression	Teacher's ratings on a seven points scale
Lack of Concentration	Teacher's ratings on a seven points scale
Low School Motivation	Teacher's ratings on a seven points scale
Poor Peer Relations	Sum of like-sexed classmates' ratings
<i>Intrinsic problems</i>	
Doesn't Like School Generally	Pupils' questionnaire: sum of items
Psychosomatic Reactions	Pupils' questionnaire: sum of items
Low Self Esteem	Teacher's ratings of timidity
Feelings of Low Peer Status	Self-rated popularity
Disharmony	Teacher's ratings on a seven points scale
Overambition	Teacher's ratings on a seven points scale

The variable 'Poor Peer Relations' was measured via a sociometric questionnaire where the children were instructed to pick out those whom they would want to have as class mates if they had to move to another smaller classroom. For further information about the variables the reader is referred to Magnusson, Dunér and Zetterblom (1975).

In the analyses, the measures from age 13 were dependent variables and the measures from age 10 were control variables, as is explained below.

Statistical analyses

All raw scores were first transformed to T-scores with a mean of 50 and a SD of 10 for each age separately. All scales were turned so that a high score means bad adjustment. For each dependent variable at age 13, data were analyzed by a two-way analysis of covariance with one factor being Family Structure and the other one being sex. The analysis was done with the same variable at age 10 as covariate. The analysis addressed the question of whether, for each of the adjustment variables at age 13, children from intact homes differed from those from separated-parents' homes, whether the sexes differed significantly and whether there was any interaction between age and sex. This was done after controlling for preexisting differences at age 10. It should be noted that the method used is equivalent to studying mean change between ages 10 and 13 when controlling for preexisting differences (Bergman, 1981). In non-experimental research of the kind that is discussed here, it is usually impossible to obtain random samples. Due to the experimental nature of ANCOVA, which does not lend itself uncritically to the analysis of non-experimental data, the obtained significances should therefore be viewed with caution.

RESULTS

Extrinsic adjustment

As a basic description, the means of the variables concerning extrinsic adjustment are shown in Table 4.

For instance, it is seen from Table 4 that, at age 13, there was a tendency for children from separated homes to exhibit more Lack of Concentration in school work than children from intact homes did. It is also seen in Table 4 that girls from separated families had a lower School Motivation than girls from intact homes did. No such tendencies were present at age 10, nor were noted any differences between the Intact Family group and the Separated Family group with regard to Aggression, Motor Restlessness, and Poor Peer Relations at any time.

Table 4. Means of the variables concerning extrinsic adjustment.

	Age 10				Age 13			
	Boys		Girls		Boys		Girls	
	Int.f.	Sep.f.	Int.f.	Sep.f.	Int.f.	Sep.f.	Int.f.	Sep.f.
Aggression	51.39	51.51	48.01	48.19	50.58	49.23	48.60	51.13
Motor Restlessness	52.00	50.62	47.50	49.29	51.03	53.03	47.87	50.06
Lack of concentration	51.09	50.55	48.33	51.65	50.93	58.68*)	48.19	53.61*)
Low School Motivation	50.83	53.19	48.46	49.74	50.65	56.03	48.32	54.66*
Poor Peer Relations	50.12	46.65	50.21	47.08	49.95	51.05	50.20	47.95

Note. *) $p < .10$ using a two tailed t-test of the within-sex difference between the Separated Family group and the Intact Family group.

* $p < .05$

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The results from covariance analyses are presented in Table 5 in which the means at age 13 are compared after controlling for preexisting differences at age 10. It is seen that for each of the variables Lack of Concentration and Low School Motivation, a sex effect and a family structure effect are found, but no interaction effect between sex and family structure. Boys, whether from separated families or intact ones, had more concentration difficulties and were less motivated at school than were girls. On the other hand, children, whether boys or girls, from separated families had significantly more concentration difficulties and were to a lesser extent motivated at school than had like-sexed children from intact homes. Thus, the main finding is that children who experience a separation tended to develop problems in the school concerning school motivation and concentration at school work.

Table 5. Results from covariance analyses with an extrinsic adjustment problem at age 13 as the dependent variable with Family Structure and Sex as the two factors and with the corresponding adjustment problem at age 10 as the covariate.

Adjustment problem	F-value of effect		
	Sex	Family structure	Interaction
Motor Restlessness	1.783	1.170	0.174
Aggression	0.504	0.109	0.804
Lack of Concentration	4.747*	7.354**	0.603
Low School Motivation	3.202*)	6.603*	0.151
Poor Peer Relations	0.005	0.341	0.815

*) $p < .10$ * $p < .05$ ** $p < .01$

Intrinsic adjustment

As a basic description, the means of the variables concerning intrinsic adjustment are given in Table 6.

Table 6. Means of the variables concerning intrinsic adjustment.

	Age 10				Age 13			
	Boys		Girls		Boys		Girls	
	Int.f.	Sep.f.	Int.f.	Sep.f.	Int.f.	Sep.f.	Int.f.	Sep.f.
Doesn't Like School Generally	50.55	56.22*)	49.49	49.36	51.44	53.16	48.38	50.39
Psychosomatic React.	49.09	52.08	50.74	48.44	49.32	56.30*	50.17	51.62
Low Self Esteem	49.41	51.07	50.39	49.88	49.78	56.47*	50.28	47.95
Feelings of Low Peer Status	50.16	49.63	49.68	50.35	50.28	50.50	50.00	48.83
Disharmony	51.26	49.59	48.01	48.63	50.24	53.08	48.67	51.74
Overambition	49.80	51.04	50.44	53.77	49.61	51.51	51.10	47.26

Note. *) $p < .10$ using a two tailed t-test of the within-sex difference between the Separated Family group and the Intact Family group.

* $p < .05$

- " -

It is seen from Table 6 that 10 years old boys from separated homes tended to dislike school more than their counterpart from intact homes did. This tendency is absent at age 13. However, 13 years old boys from separated families showed more psychosomatic reactions and exhibited lower self esteem than their counterparts from intact families did. No comparable differences were found for the girls, nor were there noted any differences between children from intact families and children from separated families with regard to the variables Feeling of Low Peer Status, Disharmony and Overambition.

The results from covariance analyses are presented in Table 7 in which the means at age 13 are compared after controlling for preexisting differences at age 10. It was found that boys, in general, significantly differed from girls in their liking of school. Family structure did not have any effect on this variable and no interaction effect was found between family structure and sex. On the other hand, while there were no difference between boys and girls with regard to the variable Psychosomatic Reactions, children from separated families, regardless of sex, showed more psychosomatic reactions than children from intact families did ($p < .10$).

Table 7. Results from covariance analyses with an intrinsic adjustment problem at age 13 as the dependent variable with Family Structure and Sex as the two factors and with the corresponding adjustment problem at age 10 as the covariate.

Adjustment problem	F-value of effect		
	Sex	Family Structure	Interaction
Doesn't Like School Generally	16.955***	2.201	0.044
Psychosomatic Reactions	0.038	3.754*)	0.872
Low Self Esteem	0.039	0.877	3.884**
Feelings of Low Peer Status	0.022	0.036	0.170
Disharmony	0.085	2.533	0.048
Overambition	3.195*	0.150	1.628

Note. *) $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

An interaction effect between sex and family structure was found for the variable Low Self Esteem. *Boys* from separated families showed to higher extent indications of low self esteem at age 13 when compared with their counterparts from the intact family group while *girls* from separated families showed to lesser extent indications of low self esteem than their counterparts from intact families did.

A sex effect was found for the variable Overambition. Boys showed a higher ambition than girls did. No effects were found for the variables Feelings of Low Peer Status and Disharmony.

DISCUSSION

For some adjustment reactions, the results indicate that there are differences between children who were subjected to a separation between the ages of ten and 13 and those who were not. These differences persists also after controlling for preexisting differences between the two groups. With regard to extrinsic adjustment problems, the reactions are significantly different for two problems, namely the teachers' ratings of lack of concentration and lack of school motivation, with children subjected to a separation exhibiting negative reactions. No sex differences are found here. After controlling for preexisting differences, the differences between the separation group and the control group are about a half standard deviation. These results are in line with what other researchers have found concerning the effects of separation on out-directed behavior (Hammond, 1981) but it is also interesting to note that for the most antisocially oriented behavior, namely aggressiveness, no significant difference is found. One reason for this may be that behavior like concentration and demonstrated interest in school work are more easily affected by various environmental factors than aggressiveness, which is more of a basic trait being fairly well established already at the beginning of the age span under study.

With regard to intrinsic adjustment problems, a weak difference between the separation group and the intact group is found for psychosomatic reactions so that the former group has reacted with some symptoms of this kind. The results concerning self esteem are interesting: no effect

is found neither for sex nor for belonging to the separation/intact group when considered singly. However, a highly significant interaction effect is found indicating that, after controlling for preexisting differences, boys react to a separation with a lowered self esteem and girls react with a somewhat elevated self esteem. In all cases of separation it is the father who is lost and the reason for the sex difference may be that the loss of the primary identification object for the boys affect their ability to form a firm picture of themselves as a man in being (Hetherington, 1979).

With the above exception, we have not found any large sex differences in the reactions to separation; however this conclusion may be altered when a larger sample is analysed permitting more powerful analyses of the interaction effects between sex and separation/intact family.

It should be kept in mind that the sample of separated children that was studied here is small. However, a large control group is available and we believe that the longitudinal design used has provided us with a fairly powerful tool for discovering any large effects of separation on the adjustment problems under study. Due to the fact that it was controlled for differences in the adjustment variables *before* the separation it is reasonable to believe that we have been able to rule out many trivial explanations of the observed differences (cf. the discussion in the introduction and Bergman, 1981). It should be pointed out, however, that there is no certain way of controlling for preexisting differences in non experimental settings (Lord, 1967). Since age may be an important factor and it appears not possible to generalize the results found here far outside age range under study, i.e., 10 - 13 years of age.

It is worth noting that a measure of a child's situation before a divorce may be influenced by an ongoing marital conflict and thus not give a 'true' pre divorce measure. This may have led in our case to an *underestimation* of the effects of divorce, since a part of this effect is included when controlling for pre divorce differences between the divorce group and the control group. We think this is an important aspect to be considered in future studies.

A few studies have undertaken the task of identifying factors that modifies the effects of separation in a positive direction. For instance, Rutter (1971) identified a good adult-child relationship as an important positively moderating factor on the child's adjustment. He also stressed the importance of temperamental variables in the child as a modifier of behavior problems (Dunn, 1980; Rutter, 1977). This kind of studies brings the attention to an important set of considerations that should be discussed in the present context, namely:

(1) Not all children react in the same way to a separation; some may react negatively, some may not react at all, and some may react positively. The task of finding factors that modifies the effect of a separation in a positive direction is of obvious importance.

(2) Each child exhibits a panorama of adjustment reactions and it is fully possible that some children react to a separation in such a way that some adjustment factors are negatively affected whereas others are not affected at all or are even improved.

The possible reaction patterns discussed in (1) and (2) above are *not* studied in the conventional studies of separation (including the present one); what is studied is the overall net effect for all separated children for one adjustment aspect at a time. This is a natural starting point for finding large, overall effects but to take (1) and (2) into consideration a different approach is necessary. Here different approaches are possible but to us it is natural to start from a *person approach perspective* in which each person is viewed as a whole (Bergman & Magnusson, 1987; Magnusson & Bergman, in press). This approach is based on an interactional paradigm (Magnusson, 1987) and in the present context it would mean that each child's panorama of adjustment reactions should be viewed as an inseparable profile or configuration of reactions to be studied as a whole. It is our intention to apply this approach to future studies of adjustment reactions to separation.

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