

Behavioral and emotional problems in foster children in Flanders: a prevalence study

Summary

In the Flemish region of Belgium, about 2,000 children are placed in foster families in the purview of special youth assistance.

In this paper we examine the prevalence of behavioral and emotional problems in a representative sample of four to twelve-year-old foster children in Flanders. We also compare problem behavior of Flemish children in the general population, in foster care and in residential care.

This study is part of a large-scale epidemiological investigation into problem behavior among children in Flanders, initiated and subsidized by the Flemish government, in particular by the Ministry of Public Health (Hellinckx, De Munter & Grietens, 1991, 1993).

After a brief introduction to prevalence studies of foster children, we explain the method used in the present study, the sampling procedure and the assessment technique. Next, the main findings will be presented and discussed, including comparisons with prevalence of behavioral and emotional problems in the general population and in children in residential care.

Introduction

In 'Child Care in the EC', Colton and Hellinckx (1993) observed that research on foster care in the EC countries is very scant. This has been confirmed by the search for literature for this study. On the basis of an analysis by Psyccit, Eric and Sociofile, we can state that empirical research on problem behavior in foster children in America is rather scarce. The first studies, published at the end of the seventies, provided only rough prevalence rates on topics defined in divergent and sometimes vague ways as 'psychological disorders', 'psychiatric disorders', 'abnormal behavior', 'maladjustment', and so on. All prevalence studies have clearly shown that psychological problems and psychopathology are very frequently present among foster children (Fanshell & Shinn, 1978; Gruber, 1978; Swire & Kavalier, 1978). These studies point to a high prevalence of seriously deviant problem behavior, irrespective of the number and age of the research group and of the measuring method; 25 tot 35% of the foster children show problem behavior. In general population studies, the mean prevalence rate of seriously deviant problem behavior (or psychological problems) is about 10%.

A more recent prevalence study that is closer to our research is the one by McIntyre and Keesler (1986) in the United States (Tennessee). In this study, data on problem behavior in 158 foster children, aged 4 to 18, were collected by means of the 1983 version of the Child Behavior Checklist (CBCL) by Achenbach.

Nearly half the children in the sample of McIntyre and Keesler (48.7%) showed a clinically significant psychological disorder in at least one specific domain of problem behavior. Nearly 30% of the children (29.7%) manifested a clinically significant disorder in more than one domain of problem behavior. There were no significant sex and age differences among foster children concerning seriously deviant problem behavior. There was only a very slight relationship between disordered status and the amount of time children had been in foster care. All domains of problem behavior identified by the CBCL were over-represented among the foster children (this means that they had a significantly higher prevalence). Most common in this sample of foster children were externalizing problems, in particular aggressive and delinquent behavior, as well as problems concerning hyperactivity and immaturity. The prevalence rates in this study were even higher than those in most older studies (48.7% instead of about 30%).

If foster children manifest so many serious clinical psychological disorders, adequate attention should be paid to the selection of the parents as well as to the counseling methods; of course, this will have consequences for the foster care services. Therefore for the further development of foster care in Flanders, it seems to be important to investigate to what extent Flemish foster children manifest behavioral and emotional problems. An attempt to gain insight into this problem has resulted in the following research design.

Method

In this study, we screen for problem behavior in a sample of 4 to 12-year-old foster children in Flanders, placed by the special youth assistance. We give a description of the prevalence of various behavioral and emotional problems in this sample; next, we compare problem behavior prevalence rates in foster children firstly with those in the general population, and secondly with those in children who are in residential care.

This study intends in the first place to screen a sample of foster children in Flanders for problem behavior, and to describe problems reported by foster parents. Our study did not yield much information on etiological factors, (i.e. factors causing or precipitating problem behavior in foster children), except for data on the relation between sex and age of foster children and problem behavior.

A good *instrument* to measure problem behavior in 4 to 12-year-old children is the Child Behavior Checklist (CBCL) (Achenbach, 1991). The CBCL has to be filled out by parents and includes 20 items on children's competence and 120 items on various specific behavioral and emotional problems. All items have to be scored by the parent 0 if the item is not true, 1 if it is partly or sometimes true, and 2 if it is very true or often true. The higher the score, the

more behavioral and emotional problems the child actually has, or has been manifesting within the last six months.

Total problem scores can be categorized into three statistically derived ranges: a normal range (these are scores referring to 'normal' problem behavior, consistent with the child's sex and age), a borderline range (a score that cannot clearly be categorized into normal or seriously deviant), and a clinical range (a score which is seriously deviant).

Apart from a comprehensive problem score and specific item scores, subjects can score on several domains of problem behavior, the so-called CBCL syndromes. There are eight syndromes: Withdrawn, Somatic Complaints, Anxious/Depressed, Social problems, Thought problems, Attention problems, Delinquent behavior and Aggressive behavior. The first three syndromes are manifestations of internalizing problem behavior. Externalizing problems refer to types of problem behavior that cause suffering or distress in others (e.g. arguing, disobedience), whereas internalizing problems cause suffering or distress in the self (e.g. sadness, loneliness). All syndrome scores can be categorized into a normal, borderline, or clinical range.

Nowadays, the CBCL is a very frequently used instrument. The effectiveness of the CBCL in identifying behavioral and emotional problems in children is well documented. Both reliability and validity of the instrument are sufficient to warrant its use for the assessment of child-psychopathological disorders. Until now, it has been translated into nearly 50 languages and has been applied in more than 1,000 research projects (Brown & Achenbach, 1993).

Sampling procedure

In Flanders, nearly 2,000 foster children are placed by (within the purview of) special youth assistance. In order to facilitate these foster care placements, special services have recently been established. At his moment, there are 22 'foster care services' in Flanders. The importance of these services has increased considerably over the last years. At the end of 1991, they were involved in about two-thirds of all foster care placements within special youth assistance (Hellinckx & Van den Bruel, 1993).

All children in our sample were placed by a foster care service within special youth assistance.

From a total of 22 services, a sample of 15 was drawn, taking into account the distribution of services over the five Flemish provinces. Within each province, services were selected at random. Fourteen services participated in the study and sent CBCL questionnaires to all foster families of currently placed 4 to 12-year-old children. To be selected for the sample, children needed to have been living with the foster family for at least three months. Attachment theory suggests that after three months most children should be able to cope with the new situation, and that from then on the initial behavioral reactions to placement should gradually subside (Bowlby, 1973; Hulse & White, 1989).

In all, the sample consisted of 638 4 to 12-years-olds. The Achenbach Child Behavior Checklist (CBCL) was sent to the foster parents by mail, together with an introductory letter and a return envelope. In the introductory letter, the survey was described and parents were

invited to participate and complete the CBCL. If necessary, parents could turn to their foster care service to ask for more information. We preferred to send questionnaires by mail, because we knew by experience that this procedure was reliable. It yielded very high response rates (nearly 83%) in the large-scale prevalence study in the general population (Hellinckx, De Munter & Grietens, 1991, 1993).

The distribution of the questionnaires was coordinated by the foster care services. In order to reduce the psychological distance between respondents and researchers, parents were asked to return the completed questionnaire to their service. 353 questionnaires were collected, 62 were incomplete, so the response rate was 50.5% of the total sample ((353-62)/(638-62)).

The sample was distributed according to sex and age group as follows:

Table 1. *Distribution of the sample of foster children according to sex and age*

	4-6 years old	7-9 years old	10-12 years old	total
boys	51	55	41	147
girls	47	43	54	144
total	98	98	95	291

We preferred to use age groups instead of single ages, and have divided the sample into three groups: 4 to 6-year-olds, 7 to 9-year-olds, and 10 to 12-year-olds. Cells of sex and single age were considered too small for statistical analysis. Age groups can be justified on the basis of the small numbers of significant age effects in problem behavior in 4 to 6 and 7 to 12-year-olds that were found in our large-scale epidemiological study (Hellinckx, De Munter, & Grietens, 1991, 1993). There were no significant differences associated with sex and age group ($\chi^2 = 3,391$; $p = 0,184$).

Results

CBCL scores of foster children will be presented and discussed below. There are three levels of CBCL scores: 1) total problem scores and scores on the externalizing and internalizing syndromes, 2) syndrome scores and 3) item scores.

The first level of analysis is that *of the total problem score and scores on the Externalizing and Internalizing syndromes*.

In table 2, data of the total problem scores have been categorized according to the statistically derived CBCL ranges: the normal range, the borderline range and the clinical range.

Table 2. Distribution (%) of CBCL total problem scores in foster children according to sex (N = 291)

	normal	borderline	clinical
boys	66 (45.9%)	11 (7.5%)	70 (47.6%)
girls	87 (60.4%)	9 (6.3%)	48 (33.3%)
	153 (52.6%)	20 (6.9%)	118 (40.5%)

As can be seen in table 2, more than half the foster children (52.6%) manifested problem behavior that could be classified in the normal range. More than forty percent of the children (40.5%) manifested seriously deviant problem behavior that can be classified in the clinical range. The problem behavior of 6.9% of the children could not be classified clearly, and had to be considered as 'borderline'.

Significantly more boys than girls showed seriously deviant problem behavior, which means that their total problem scores are in the clinical range. 47.6% versus 33.3% ($\chi^2 = 5.579$; $p = 0.0091$). More girls than boys scored in the normal range ($\chi^2 = 6.417$; $p = 0.0057$).

The distribution of scores on the Externalizing syndrome (table 3) closely resembled that of the total problem score, in that significantly more boys than girls were categorized in the clinical range, 42.2% versus 29.8% ($\chi^2 = 4.26$; $p = 0.019$) and in the borderline range, 12.2% versus 4.9% ($\chi^2 = 5.25$; $p = 0.011$). Significantly more girls than boys scored within the normal range (66% versus 45.6%) ($\chi^2 = 11.447$; $p = 0.000$).

Table 3. Distribution (%) of CBCL Externalizing scores in foster children according to sex (N = 291)

	normal	borderline	clinical
boys	67 (45.6%)	18 (12.2%)	62 (42.2%)
girls	95 (66.0%)	6 (4.29%)	43 (29.8%)
total	162 (55.7%)	24 (8.2%)	105 (36.5%)

On the Internalizing syndrome (Table 4), considerably fewer children scored in the clinical range (21.3%) than on Total Problem Behavior or the Externalizing syndrome (see previous tables). Sex differences were only found concerning the borderline range: boys had significantly higher scores in this range than girls, 14.3% versus 4.9% ($\chi^2 = 6.385$; $p = 0.0058$).

Table 4. *Distribution (%) of CBCL Internalizing scores in foster children by sex (N = 291)*

	normal	borderline	clinical
boys	96 (65.3%)	21 (14.3%)	30 (20.4%)
girls	105 (72.9%)	7 (4.9%)	32 (22.2%)
total	201 (69.1%)	28 (9.6%)	62 (21.3%)

On the basis of this classification of CBCL scores, one might conclude that there are two groups of foster children : a first group (nearly half of them) who score in the borderline or clinical range, and a second large group (more than half of the sample) of non-deviant foster children scoring CBCL in the normal range and who seem to develop well. Foster children manifesting seriously deviant problem behavior show especially high scores on the Externalizing syndrome. In this regard, boys seem to be more at risk than girls.

To get a more detailed view of the kind of problem behavior foster children manifest, it is necessary to take a closer look at the *scores on CBCL syndromes* (table 5).

Table 5. *Percentage of foster children scoring in the clinical range on at least one CBCL syndrome or more than one CBCL syndrome (N=291)(147 boys, 144 girls)*

	at least one CBCL syndrome	more than one CBCL syndrome
boys	63.9	50.3
girls	55.5	42.6
total	59.8	46.4

First we checked the number of foster children scoring in the clinical range on at least one CBCL syndrome. About sixty percent of the foster children (59.8) scored in the clinical range on at least one CBCL syndrome, and manifested a disorder on at least one domain of problem behavior. More boys than girls had deviant scores on CBCL syndromes, 63.9% of the boys versus 55.5% of the girls ($x^2 = 1.79$; $p = 0.09$). Many children (46.4%) showed more than one disorder. Again more boys than girls had multiple syndromes; 50.3% of the boys versus 42.6% of the girls ($x^2 = 1.55$; $p = 0.10$).

These prevalence rates are higher than those in the study by McIntyre and Keesler (1986). As you will remember, nearly half the foster children in their study (48.7%) showed a clinically significant psychological disorder on at least one specific domain, and nearly 30% (29.7%) of them showed multiple syndromes.

There are several hypotheses to explain the difference in prevalence rates between the two studies. Ours involves differences in the children's age range (4 to 18 in the study of McIntyre & Keesler, compared with 4 to 12 in our study). We know from the epidemiological literature that problem behavior, especially externalizing problem behavior, declines with age. But this decline probably is not large enough to designate differences in age range as the only or primary factor explaining the higher prevalence rates in our study. A more plausible hypothesis has to do with the period of time in which the two studies were performed. The study of McIntyre and Keesler was performed in 1986, ours in 1993. During this time interval, changes in special youth assistance occurred (Colton & Hellinckx, 1993). On the one hand, both practitioners and researchers have observed that children separated from their families come from family circumstances that are more problematic and probably are more traumatized, than in the past; on the other hand, there has been a further decline in residential care (desinstitutionalization), followed by a growth of foster care. This evolution could imply that proportionally more children with severe problem behavior are placed in foster families than a few years ago.

Let us now take a closer look at the distribution of CBCL syndromes in our sample of foster children. (table 6)

Table 6. Prevalence (%) of CBCL syndromes in foster children (distributed according to sex) ($N = 291$) (144 boys, 147 girls)

CBCL syndromes	Boys	Girls
1 = Withdrawn	19.0	2.22
2 = Somatic Complaints	6.8	6.9
3 = Anxious/Depressed	10.2	9.7
4 = Social problems	32.0	29.9
5 = Thought problems	12.2	16.7
6 = Attention problems	44.9	34.7
7 = Delinquent behavior	34.7	30.6
8 = Aggressive behavior	34.7	20.8 sign. $p < 0.05$

It is clear that within the sample of foster children, four syndromes have comparatively high prevalence rates, namely the externalizing syndromes (delinquent behavior and aggressive behavior), attention problems (which has the highest prevalence rate) and social problems. The 'aggressive behavior', 'delinquent behavior' and 'attention problems' syndromes had comparatively high prevalence rates in the study of McIntyre and Keesler (1986) and are often mentioned in literature on psychosocial developments of children placed out of home (for instance Van Ooyen et al., 1990; Van Ooyen, 1991). The high prevalence of social problems can probably be associated with a lack of social competence in foster children, or interpreted as

the outcome of the children's history of social deprivation and frequent separation. All four syndromes were reported more in boys than girls, although the gender was not significant for Delinquent behavior and Social problems.

In our sample of foster children, we found several *sex differences* in problem behavior, on the total score as well as on syndrome and *item scores* (Table 7). Boys had higher scores than girls on nearly all of these items. Many of these sex differences were related to externalizing problem behavior. So, boys in foster care seemed to be more likely to develop seriously disturbed problem behavior than girls. The same sex differences in problem behavior can be found in the general population, but the sex differences in this sample of foster children were much more significant. There are two possible explanations for this sex difference. On the one hand, several epidemiological studies have shown that, although differences between boys and girls in prevalence rates concerning behavioral and emotional problems were very slight, boys had more severe psychopathological or psychiatric disorders than girls (ratio 2:1) (Hellinckx, De Munter, & Grietens, 1991). So, probably, a larger number of severely disturbed boys than girls are placed in foster families. On the other hand, boys could be more vulnerable to a far-reaching psychosocial stressor such as foster care placement, and thus manifest more difficulties in coping with it than girls. Data on the greater vulnerability of boys to various psychosocial stressors were revealed by many studies (Eme, 1979; Rutter & Garmezy, 1983; Berk, 1989; Goodyer, 1990).

Of course, longitudinal studies are required to gain a better insight into the differential influence of foster care placement on boys and girls. These studies should include data on the behavioral history of children before their actual placement.

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Table 7. Significant sex effects on CBCL items scores in the sample of foster children (N = 291) (B = boys, G = girls) (* p < .05. ** p < .01. *** p < .001. **** p < .0001)

Externalizing	Internalizing	Other
Argues a lot(B>G)*	Nervous(B>G)**	Acts too young(B>G)*
Bragging(B>G)****		Can't concentrate(B>G)*
Destroys own things(B>G)****		Can't sit still(B>G)***
Destroys other people's things(B>G)***		Cruel to animals(B>G)**
Disobedient at home(B>G)*		Teased a lot(B>G)*
Disobedient at school(B>G)****		Impulsive(B>G)***
Involved in many fights(B>G)****		Overweight(B>G)***
Hangs around children in trouble(B>G)*		Sleeps less than other kids(B>G)**
Physically attacks people(B>G)****		Speech problems(B>G)*
Screams a lot(B>G)**		Wets the bed(B>G)**
Showing off or clowning(B>G)****		
Swearing(B>G)****		
Teases a lot(B>G)***		
Temper tantrums(B>G)****		
Unusually loud(B>G)*		
Vandalism(B>G)**		

A great many significant differences were found between age groups (table 8)

Table 8. Significant age group effects on CBCL item scores in the sample of foster children (N = 291) (Y = younger children, O = older children, NL = non-linear age effect) (* p < .05. ** p < .01. *** p < .001. **** p < .0001)

Externalizing	Internalizing	Other
Argues a lot(NL)***	Cries a lot(Y>O)**	Can't concentrate(NL)
Demands attention(Y>O)****	Feels persecuted(O>Y)****	Can't sit still(Y>O)***
Disobedient at home(NL)**		Doesn't eat well(Y>O)*
Easily jealous(NL)**		Gets teased a lot(O>Y)****
Hangs around children in trouble(O>Y)**		Impulsive(NL)*
Swearing(O<Y)*		Poor school work(O>Y)***
Teases a lot(NL)*		Prefers younger kids(O>Y)**
Screams a lot(Y>O)**		Stores up unneeded things(O>Y)***
Showing off(Y>O)*		Wets self during the day(Y>O)**
Steals at home(O>Y)**		Wets the bed(Y>O)**
Unusually loud(Y>O)***		Whining(Y>O)****

Differences between age groups had to do with all kinds of problem behavior, externalizing as well as internalizing. As you can see, some externalizing problems were more often reported in younger foster children (for instance: demands attention, screams a lot, showing off, unusually loud, swearing), others more often in older foster children (steals at home, hangs around children in trouble). The same can be said about age group differences in other syndromes. There were no significant differences in total problem behavior scores between younger and older foster children. Although our data were of a cross-sectional nature, this finding could suggest that the general prevalence of problem behavior in foster children is rather stable and changes only very little over time. Stability of foster children's problem behavior was recently reported in a Dutch follow-up study (Van Ooyen, Schiewold, Schneider, & Smeets, 1990). Externalizing problem behavior decreases with age (10 to 12-year-old foster children had the lowest scores), as could be expected from general population studies (Verhulst, 1985; Achenbach, Howell, Quay, & Conners, 1991; Hellinckx, De Munter, & Grietens, 1991).

Some problems in the domain of social relationships were more often reported in older foster children, for instance 'getting teased a lot', 'poor school work' and 'prefers younger kids'. Given the growing influence of the peer group on the psychosocial development in late childhood and adolescence, and the association between poor peer relationships in childhood and psychopathology in adolescence and adulthood (Robins & Rutter, 1990; Kupersmidt & Patterson, 1991), this finding can be of vital importance to clinical and preventive work with foster children.

A comparison of problem behavior of Flemish children in the general population, foster families and residential care

First a description of the sample

As this study is part of a large-scale epidemiological investigation into the prevalence of problem behavior in 3 to 14-year-old children in Flanders, a comparison can be made between the prevalence of problem behavior in our sample of foster children and the prevalence of problem behavior in a representative sample of the Flemish population of children. The response rate for our sample of 1,351 Flemish children was nearly 83%; this sample was representative not only for the five Flemish provinces but also for age and sex. The comparison was restricted to the group of children in the 6 to 12 age category (= 1,146 children).

In another part of this epidemiological study, the prevalence was studied of behavioral and emotional problems among children placed in a residential setting in the purview of special youth assistance. This is the case for nearly 3,300 children in Flanders. A distinction can be drawn between two types of facilities: those administered by the Flemish community, and private residential homes authorized and subsidized by the government, representing 90% of the children in residential care.

Only children placed in the private residential homes are considered in our sample of children in residential care. Children from relief and orientation centers and children from observation centers are not included in our sample.

Our sample of children in residential care is representative for the five Flemish provinces, for age and sex. The sample consisted of 259 children between 4 and 12 years old, but the comparison is applicable only to the children between 6 and 12 ($n = 224$).

The CBCL was sent to the educators, together with an introductory letter and a return envelope. In the introductory letter, the survey was described and the educators were invited to participate and complete the CBCL. The distribution of the questionnaires was coordinated by the management of the residential care institution. 224 questionnaires completed by the educators were collected; this is 86.48% of the total sample. All these data were collected over the last two years.

In the next part, we compare *the results* of the data of 3 samples, i.e. the children in foster care (F), the children in residential care (R) and the children in the general population (V).

First, we discuss the differences in the means between the three samples, for the total behavior problem scores, the broad band and the narrow band syndromes. We apply the statistical technique of analysis of variances 'Proc CLM' (table 9). Next, we give a further analysis of the foster children and of the children in residential care scoring within the clinical range.

Table 9. Explained variances of a one-way analysis of variance, with the samples as independent variable and the total behavior problem score, the broad band and the narrow band syndromes as dependent variables. (***) $p < 0.0001$, (*) $p < 0.05$)

R ² (df)	Total samples R ² (2/1622)	Boys R ² (2/820)	Girls R ² (2/799)
Total behavior problem	0.20***	0.24***	0.159***
Internalizing	0.19***	0.09***	0.086***
Externalizing	0.08***	0.24***	0.143***
Withdrawn	0.04***	0.045***	0.03***
Somatic Compl.	0.0002	0.0013	0.002
Anxious/Depressed	0.032***	0.035***	0.03***
Social problems	0.0781***	0.081***	0.07***
Thought problems	0.004*	0.004	0.003
Attent. problems	0.089***	0.11***	0.07***
Delinquent behavior	0.57***	0.09***	0.029***
Aggressive behavior	0.144***	0.18***	0.099***

The means between the three samples are significantly different for all CBCL syndromes, with the exception of the somatic complaints syndrome.

Two syndromes (somatic complaints and thought problems) are not significantly different in the groups of boys and girls.

The influence of the group is the highest for the total problem score (20% of variances explained), externalizing problems (19% of variances explained) and social problems (8% of variances explained). This tendency is stronger in boys than in girls for the total problem score (B : 24%, G : 16%), externalizing problems (B : 24%, G : 14%), aggressive behavior (B : 18%, G : 10%), attention problems (B : 11%, G : 7%) and social problems (B : 8%, G : 7%).

With the 'Turkey's studentized range', we discuss the differences in the means between two samples : R - F (Residential care - Foster children), R - V (Residential care - Flemish children), and F - V : (Foster children - Flemish children) for the total behavior problem scores, the broad band and the narrow band syndromes (table 10).

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Table 10. Mean differences between R-F (Residential care-Foster children), R-V (Residential care-Flemish children) and F-V (Foster children-Flemish children) with 'Turkey's studentized range' (T =total sample, B: Boys, G: Girls) (*: $p < 0.05$)

		R-F	R-V	F-V
Total Beh. pr.	T	3.95	23.33*	19.38*
	B	0.42	24.55*	24.12*
	G	6.28*	21.39*	15.10*
Internalizing	T	1.5*	4.9*	3.4*
	B	0.49	4.34*	3.85*
	G	2.79*	5.73*	2.97*
Externalizing	T	3.9*	11.05*	7.14*
	B	2.77	12.55*	9.77*
	G	3.95*	8.74*	4.79*
Withdrawn	T	0.61	2.18*	1.56*
	B	0.53	2.15*	1.61*
	G	0.73	2.25*	1.51*
Somatic Compl.	T	0.02	0.14	0.12
	B	0.08	0.34	0.26
	G	0.45	0.67	0.22
Anxious/Depr.	T	0.96	2.36*	1.40*
	B	0.33	2.11*	1.78*
	G	1.65*	2.70*	1.05
Social probl.	T	0.03	2.55*	2.51*
	B	0.24	2.72*	2.43*
	G	0.36	2.69*	2.32*
Thought.pr.	T	0.12	0.54	0.42
	B	0.06	0.53	0.46
	G	0.18	0.57	0.38
Attention pr.	T	0.91	3.77*	2.85*
	B	1.33	4.35*	3.01*
	G	0.75	3.27*	2.51*
Delinquent beh.	T	1.26*	2.74*	1.48*
	B	1.13	3.18*	2.04*
	G	1.14	2.12*	0.97
Aggressive beh.	T	2.64*	7.91*	5.27*
	B	1.64	8.98*	7.34*
	G	2.8*	6.23*	3.42*

In the comparison R-V and F-V, we find significant mean differences for the total behavior problem scores, the broad band and the narrow band syndromes, with the exception of two syndromes: somatic complaints and thought problems.

We find the same picture for boys. For girls, we do not find a significant difference between the means of the foster children and the Flemish children samples for the syndromes Anxious/depressed and delinquent behavior. The only possibly significant difference is that the means of the foster children and children in residential care samples are always higher than the means of the sample of Flemish children.

The mean total problem score for residentially placed girls is significantly higher than the mean total problem score for foster girls. For internalizing and externalizing problems, the mean of residentially placed children turns out to be significantly higher than that of foster children; however, we do not find significant differences for boys; only for girls are the means significantly higher. The means are significantly higher for girls placed in residential care than for girls placed in foster care with regard to externalizing problems, internalizing problems, aggressive behavior, anxious/depressed.

It is interesting to further analyze the data on foster children and children in residential care who scored in the clinical range, i.e. children with psychological disorders.

Table 11. Differences between mean scores of foster children (F) and children in residential care (R) scoring in the clinical range (* $p < 0.05$ (1 tail). (*) $p < 0.10$ (1 tail)

	F			R			t
	mean	SD	n	mean	SD	n	
Behavioral problems	64.53	13.62	92	66.5	17.95	98	0.84
Externalizing	27.16	6.51	77	29.17	8.76	101	1.68
Internalizing	20.07	5.49	53	19.76	5.09	68	0.32
Withdrawn	10.51	2.06	29	10.43	1.95	30	0.16
Somatic Compl.	7.2	1.78	5	7.5	1.60	8	0.31
Anxious/Depr.	15.61	2.29	13	15.19	1.63	21	0.61
Social probl.	9.29	1.54	51	9.46	2.07	45	0.46
Thought probl.	5.62	0.91	8	6.55	2.06	9	1.17
Attention	13.55	1.93	52	13.31	1.83	41	0.60
Delinquent	8.22	2.04	35	9.22	2.93	53	1.74(*)
Aggressive	26.12	3.98	31	27.62	3.26	50	1.35

Table 12. Differences in proportion of foster children (F) and children in residential care (R) scoring in the clinical range. (*: $p < 0.05$)

	F(n=221) %	R(n=225) %	chi-square	p(1 tail)
Behav. pr.	41.63	43.56	0.0996	0.3761
Ext.	34.84	44.89	4.2834*	0.0194
Int.	23.98	30.22	1.8918	0.0845
Withdrawn	13.12	13.33	0.000	0.5000
Somatic Comp.	2.26	3.56	0.2811	0.2980
Anxious/Depr.	5.88	9.33	1.4273	0.1161
Social probl.	23.08	20.00	0.4560	0.2497
Thought probl.	3.62	4.00	0.0014	0.4850
Attention probl.	23.53	18.22	1.5948	0.1033
Delinquent probl.	15.84	23.56	3.7206*	0.0269
Aggressive beh.	14.03	22.22	4.5015*	0.0169

The number of children in residential care with a total problem score in the clinical zone is higher than the number of foster care children with scores in this category, and the mean score of the children in residential care who are in the clinical zone is higher than that of the foster children in that zone. However, these differences have no statistical significance. Differences that are statistically significant are found in the externalizing scores within the clinical range. Significantly more children in residential care than foster care children display externalized problem behavior ($\chi^2 = 4.28$; $p = 0.0194$), and the mean score for this behavior is also significantly higher for children in residential care than for foster children ($t = 1.68$; $p = 0.047$). The probability of children with externalized problem behavior being placed in residential care rather than in foster care, is related to the severity of this behavior. This does not apply to internalized behavior problems, where there is no statistically significant difference between these two groups of children.

Further analysis on the level of the narrow band syndromes proves that within the clinical range, there are significantly more children with delinquent behavior and/or aggressive behavior in residential care than in foster care, and that for children in residential care the mean scores on aggressive behavior ($\chi^2 = 4.5$, $p = 0.016$; $t = 1.35$, $p = 0.09$) and delinquent behavior ($\chi^2 = 3.72$, $p = 0.02$; $t = 1.74$, $p = 0.04$) are significantly higher than for children in foster care. For children with severely delinquent behavior and/or aggressive behavior in Flanders, there is a higher probability of being placed in residential care than in foster care. We find more children with a social problem syndrome or with an attention problem syndrome in foster care than in residential care, although this difference is not statistically significant and the average scores on these types of behavior are somewhat lower.

Conclusions

On the basis of this investigation, the following conclusions and recommendations for practice can be formulated.

1. It is evident that this study has some methodological limitations, including the following:
 - The sample was restricted to foster children who were placed by foster care services; other foster care placements were not included.
 - The sample of children in residential care was restricted to private care facilities.
 - Administration of a single test, even if it is reliable and valid such as the CBCL, is not always sufficient to eliminate a possible bias in the results. Further research of these children by means of other instruments and other respondents is necessary.
 - When comparing foster children and children in residential care, the duration of care and the case history have not been taken into account.

2. Seconding previous studies (Gruber, 1978; Fanshel & Shinn, 1978; Swire and Kavalier, 1978; Mc Intyre & Keesler, 1986) we observe that according to the CBCL, filled out by foster parents and parents respectively, foster children manifest more problem behavior than children who are not in care. The average overall score for problem behavior of foster children was twice as high as the mean of children in the sample of the general population. More than 13% of the variance in the total score is explained by placement in a foster family. There is some reason for wondering whether this behavior is primarily the result of conditions that precipitated foster care placement, or whether this problem behavior is the result of the separation or is connected with the actual foster care placement setting. The study by Hulsey & White (1989, p. 507) shows that 'the effects of differing family structures and an unstable family environment, characterized by marital changes and legal history, appear more important in association with behavior than does placement in foster care.' In a study by Van Ooyen-Houben, in which children in foster care were followed for two years after their placement, by means of regular assessments as well as of assessment by social workers, it appeared that placement in foster care does not necessarily cause problem behavior.

3. The prevalence rates of psychological disorders on the basis of CBCL rates, i.e. the number of foster children manifesting one or more syndromes, was higher than that in the older comparable study by McIntyre and Keesler (1986), in which 48.7% showed a clinically significant disorder in at least one specific domain (in our study this was 59.8), and 29.7% showed multiple syndromes (in our study 46.4). Possible explanations are that they carried out their investigation 9 years ago, that nowadays residential placement is less easily decided upon and that, consequently, children with serious problem behavior are more often placed in foster care.

4. Concerning problem behavior, the results of our study suggest that the group of 4 to 12-year-old foster children can be divided into two subgroups. About half the foster children (52.6%) manifest problem behavior that can be classified in the normal range, not significantly differing from the problem behavior of same-aged children within the general population. This means that foster care should be differentiated. For common foster families in Flanders, a new type of foster family care should be organized, namely 'therapeutic' or 'specialist' foster care, aimed at helping foster parents by providing a professional care service.

An exploratory investigation (Geysels, 1994) which was carried out under our supervision, arrives at the provisional conclusion that as the number of placements is growing, whether it be in residential or in foster care, behavioral and emotional problems are on the increase too.

5. In our view the large number of foster children with seriously deviant behavior stresses the importance of diagnostic assessment before placement in foster care. Diagnostic information can help in deciding whether to place a child in a residential setting or in a foster family, and in making predictions about the psychosocial development of a child after placement. Besides, it can give indications concerning the need for and focus of psychological counseling for foster children and parents. In the line of McIntyre and Keesler, we would like to point out that, although foster care has traditionally been regarded as the domain of social casework professionals, taking into account the above data, the involvement of orthopedagogues and/or clinical child psychologists is recommended.

6. Even though an increase in problem behavior can be observed in foster children, children placed in residential care display even more problem behavior. The more seriously delinquent or the more aggressive their behavior (in the clinical zone of the CBCL scores), the higher the probability that they are placed in residential care rather than in foster care. This does not apply to children with seriously hyperactive behavior or social problems, because this behavior is more frequent in foster care children than in residential care children.

Although in Flanders, too, children with problem behavior are placed in foster care, this applies less and less often to children with delinquent and/or aggressive behavior, and it looks as if social workers are of the opinion that children manifesting such behavior are not as well cared for in foster families.

7. In Flanders, the presence of problem behavior, especially of aggressive and delinquent behavior, plays an important role in decision-making regarding placement in foster or in residential care. It is still assumed that for these children, residential care, even in a family group home, is a better solution than foster care. However, this is not the case. Adequate care for children with behavioral problems is not connected with residential or foster care as such, but with the possibility to meet the child's individual needs in terms of treatment. The decision to opt for residential or foster care should be systemic-oriented rather than child-oriented.

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