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Planned and unplanned terminations of foster care placements in the Netherlands: Relationships with characteristics of foster children and foster placements

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ABSTRACT

This study examined the role of placement and child characteristics in the unplanned termination of foster placements. Data were used from 169 foster children aged 0 to 20. Results showed that 35% of all foster placement terminations were unplanned. Outcomes of logistic regression analyses demonstrated that behavior problems, parenting stress and a non-Dutch ethnic background of the foster child increased the likelihood of a placement termination. Furthermore, risk accumulation contributed to unplanned terminations. The results indicate that supporting foster parents in managing problem behavior of the foster child and reducing parenting stress may be a key to an effective prevention of disrupted foster care placements.

1. Introduction

Foster care offers a substitute rearing environment for children whenever biological parents are not able to provide a safe home environment for their children. Reasons for not being able to provide a safe home environment are, among other things, psychiatric problems, substance use, child maltreatment, parental conflicts, acute stress, incarceration, or inadequate parenting skills (e.g., Oswald, Heil, & Goldbeck, 2010; Takayama, Wolfe, & Coulter, 1998). In the Netherlands, each year approximately 21,000 children are living in short-term or long-term foster care (Pleegzorg Nederland, 2013). The goal of short-term placement is the reunification of foster children with their families within as short as possible time. Long-term placement is intended to provide the child with a stable and safe family rearing environment until the age of 18, ensuring an optimal developmental outcome (Strijker, Knorth, & Knot-Dickscheit, 2008). For both short- and long-term placements the duration of the stay is planned by child protection services.

Placements not ending according to plan can be seen as an indicator of unsuccessful placements. The proportion of placements that is considered unsuccessful varies internationally between 20% and 50% (e.g., Minty, 1999), and within previous Dutch studies between 22% and 50% (Strijkeret al., 2008; Van der Ploeg, 1993). Untimely ended placements (i.e. not anticipated at the initiation of the placement) include the movement of a foster child from a foster family to another foster family or institution, which may constitute a stressful life event. Specifically, this event results in the loss of intimate bonds and relations, and in the necessity to form new bonds and relations, and to get used to a new family and school environment, which can be taxing as well (Strijkeret al., 2008). Moreover, in unplanned termination cases the child might not be able to anticipate and not being carefully prepared resulting in a lack of clarity which may renew feelings of ambiguity in a child regarding placement context (i.e. duration, reasons) and the new relationships it has to form (see the feelings of ambiguity described by Mitchell & Kuczynski, 2010, regarding entering into foster care). Furthermore, unsuccessful placements diminish the chance of reunification with the family of origin and increase the risk of consecutive instable placements (e.g., Farmer, 1996; Newton, Litrownik, & Landsverk, 2000; Rubin, O'Reilly, Luan, & Localio, 2007; Wells & Guo, 1999). Consequently, unsuccessful placements are found to have a negative impact on developmental outcomes of foster children (e.g., internalizing and externalizing behavior problems, drug use, high school dropout; Aarons et al., 2010; Herrenkohl, Herrenkohl, & Egolf, 2003; Newton et al., 2000; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007). This adds to the already existing risk of negative developmental outcomes due to adverse experiences and often traumatic history (e.g., abuse) in their family of origin (e.g., Armsden, Pecora, Payne, &

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Szatkiewicz, 2000; Oswald et al., 2010), and their separation from their family of origin and transition into foster care (e.g., Oosterman et al., 2007; Stovall & Dozier, 2000).

Most previous studies focused on the relationship between unsuccessful placements and risk or protective factors related to the child's background or related to characteristics of the foster placement. A review and meta-analysis of factors associated with unsuccessful placements by Oosterman et al. (2007) showed that the odds of placement success — a placement ending as expected — were smaller in case of behavioral problems of the child, older age of the child at placement, history of abuse, history of institutional care, higher number of previous placements, shorter length of stay, and the presence of biological children of foster parents. Significant protective factors were associated with foster placement characteristics directly related to the foster family: high quality of caregiving, high motivation among caregivers, family resources and network support to caregivers (Oosterman et al., 2007). Since the review and meta-analyses of Oosterman et al. (2007), several other studies on relationships between risk and protective factors and placement success have been conducted. See for instance the study by Strijker et al. (2008), that confirms previous findings, but also the study by Holtan, Handegård, Thørnblad, and Vis (2013) who included socio-demographic aspects and behavioral problems in their study, but did not find any of these significantly predicting placement disruption. Crum (2010) specifically focused on foster parenting and found that higher levels of receiving social and emotional support and foster parents' consequent limit setting are significant predictors regarding length of stay. Remarkably, these factors did not predict placement success. Rock, Michelson, Thomson, and Day (2013) more recently conducted a review including both quantitative and qualitative studies on placement disruption and placement instability. In their synthesis they reported the strongest evidence for: older age of children, externalizing behavior, longer total time in care, residential care as first placement, separation from siblings, non-kinship foster care, and multiple social workers to be risk factors for placement disruption. Protective factors appeared: placement with siblings, placement with older foster carers, more experienced carers with strong parenting skills, and placements where children could develop themselves more intellectually (Rock et al., 2013). In sum, adversity in the history of the foster child, socio-demographic and behavioral aspects of the foster child, as well as the quality of the child rearing environment in the foster family and type of placement appear to be important factors in whether or not placement disruption occurs.

In this study we focus on (un)successful placements and the role of child and placement characteristics. In contrast to most previous studies, we included both short- and long-term placements in this study because unplanned termination can have negative consequences, regardless of planned placement duration. Furthermore, this study focusses on planned and unplanned terminated placements using a retrospective design with a large time frame, which allows for an examination of foster placement processes over a longer time period than most previous research. Moreover, planned and unplanned terminated cases are compared in this study on a wide range of child and placement related factors (contrary to studies with a more limited focus, e.g. Crum, 2010; Leathers, 2005), that have been previously distinguished as potential risk factors for placement disruption (see methods). Finally, besides focusing on the predictive value of the specific factors, we additionally focus on cumulative risk associated with placement outcome. The cumulative risk literature is based on the assumption that the developmental course of a child is the result of an interplay between multiple risk and protective factors situated in the child itself and in the context surrounding the child on a more proximal or distal level (Hermanns, 1998; Sameroff, 2010). Research on risk factors suggests that it is the accumulation of risks, independent of the presence or the absence of specific risk factors that causes the dysregulations of child rearing processes and poor developmental outcomes of children (Brown, Cohen, Johnson, & Salzinger, 1998; Evans, Li, & Whipple, 2013; Sameroff, 2009). Raviv and colleagues also showed that this holds within a by definition high risk sample like foster children: they found a linear relationship between the accumulation of risk factors in children placed in various forms of out-of-home care and their mental health problems (Raviv, Taussig, Culhane, & Garrido, 2010). It is likely that an accumulation of risk factors increases the strain on the foster placement and might result in more unsuccessful placements.

In short, in this study we investigate the proportion of (un)successful foster placements, the relationship between foster child- and placement characteristics and unplanned and planned terminated cases and the role of risk accumulation.

2. Method

2.1. Procedure and sample

Ethical approval for this longitudinal retrospective study was obtained from the Research Institute and the boards of the participating Foster Care Organizations. Terminated placements of foster children within a one year time frame at two regional Dutch Foster Care Organizations were included in the study. Children who received crisis interventions or partial foster care placements were excluded. The data were gathered from the case files of the foster children and the foster parents as recorded by the Foster Care Organizations.

The cases existed of the files of 168 foster children (among them 29 siblings) and their foster parents. The foster care placements were with 154 foster families of different parental compositions (foster mother and foster father: n = 119, single foster mothers: n = 27, single foster fathers: n = 2, two foster mothers: n = 4, unknown: n = 2). The foster parents provided short-term or long-term foster care placements to children between the age of 0 and 18 years old.

Three trained assistants carried out the data collection. A coding scheme and a coding manual with decision rules was developed, based on Strijker and Knorth (2009) and other literature. The coding scheme was tested and revised before the start of the actual data collection. During the coding process, uncertainties were discussed with the supervisors and scores were jointly determined. When files or information in the files were missing, the foster care coordinator was contacted to obtain these files or information. When information in the files remained missing, it was considered as unknown. As multiple assistants coded the files, interrater reliability was examined based on 23 files (14% of the files). Overall, the interrater reliability was substantial to perfect (Cohen's Kappa between .69 and 1; Pearson's *r* between .75 and 1; Landis & Koch, 1977).

2.2. Instrument

The coding scheme consisted of questions concerning the type of termination and factors related to the foster child and placement (theoretically distinguished risk factors).

2.2.1. Termination of the placement

Two main categories were coded: planned and unplanned terminations. Reasons for planned terminations were coded into three categories: 1) leaving the foster family as planned (e.g. to another foster family, reunification as planned), 2) the foster child reached the age of 18 — this means the foster organization closes the file, but does not necessarily mean that the child also leaves the foster family-, or 3) other planned reasons to leave the foster family (such as earlier possibility for reunification or to another type of care). Main reasons for unplanned terminations were recorded as: 1) behavioral problems of the child, 2) problems in the foster family (such as divorce), and 3) other reasons (such as running away, biological parents ended placement, a problematic relationship between the foster parents and social workers).

2.2.2. Child characteristics

The gender, age, and ethnicity of the foster child were recorded. The following child history variables were coded (time frame: from first out of home placement until last placement): number of prior placements in youth care, total time in youth care until last out of home placement (residential and foster placements), abuse, and indication of attachment problems. Regarding abuse in the past, both official reports and strong indications of abuse, as mentioned by involved persons, such as social workers, relatives or teachers, were used. The occurrence or non-occurrence of the following subforms of abuse prior to this placement was coded: physical abuse, emotional abuse, neglect, sexual abuse and witness to violence (see Strijker & Knorth, 2009). Furthermore, based on these subforms an additional aggregated variable was constructed measuring whether or not any form of abuse occurred in the past. The existence of attachment problems with the biological parents were coded when an existing diagnosis based on *DSM-IV*, or a diagnosis with the GIH (Global Indication list of Attachment, Polderman, 2000) in cases of an insecure attachment, or attachment problems indicated by a qualified professional, were reported in the case file. Related to the last placement, the terminated placement in 2010, the following aspects were examined: age at beginning of last placement, behavioral problems of the foster child during the last placement, and the frequency of contact with biological parents. Behavioral problems of the foster child during the placement were measured in two ways: dichotomous codes about the existence of internalizing and externalizing problems, and a measure of problem behavior. Problem behavior was coded using a shortened version of the Child Behavior Checklist as developed by Barber and Delfabbro (2002). The checklist originally consists of three dimensions: 'behavioral problems' (six items, e.g. physical assault, and lying and cheating; $\alpha = .72$), 'emotional problems' (four items, e.g. feelings of unhappiness, and anxiety; $\alpha = .72$), and 'hyperactivity' (three items, e.g. inability to sit still and inability to concentrate; $\alpha = .82$). Items are coded on a 3-point Likert-scale: 0 = never, 1 = occasionally, 2 = often.

The frequency of contact with the biological parents was coded on a 3-point Likert-scale: 1 = never, 2 = regularly, 3 = often. Contact was scored as often when there was at least one monthly visit. When the child and the parent saw each other less frequent than once a month the contact was coded as occasionally.

2.2.3. Placement characteristics

The following variables were included in this part (time frame: last placement); the presence of biological children, the smallest age difference between the foster child and a biological child, the quality of contact between the foster child and bio-child, presence of other foster children, placement with sibling(s), type of foster family (kinship care versus foster care) and the type of foster care (short term versus long term placements), age foster parents at start placement, gender foster parents (descriptive analyses), ethnicity (Dutch versus non-Dutch and mixed origin), ethnic match between foster child and foster parents (none, (partial) match), educational level of the foster parents, number of prior foster children, length of foster care experience, number of stressful life events, parenting stress, a parenting skills, and emotional support.

Information about the quality of the contact between the foster child and the own children of the foster parents was measured on a 3-point Likert scale: 0 = negative, 1 = ambivalent, and 2 = positive. To measure stressful life events of foster parents during the placement, a list of 40 stressful life events from the Nijmegen Parental Stress Index (NOSI; De Brock, Vermulst, Gerris, & Abidin, 1992) was used. Examples of stressful life events items are: conflicts in the family, or, a long-lasting disease. The total number of stressful life events was reported. Parenting stress was measured on the case file information about how often the foster parents found parenting the foster child hard and about the frequency of conflicts between foster child and foster parent. Parenting stress was measured on a 3-point Likert-scale ranging from 0 to 2, with the response options "never stress", "sometimes stress" and "often stress". In order to measure parenting skills, the evaluation of the foster-care worker about the parenting capacities of the foster parents was used. Parenting skills were measured on a 3-point Likert-scale, ranging from inadequate (0) to adequate skills (2). Emotional support was measured on a 3-point Likert scale, ranging from no emotional support (0), to lots of emotional support (2) from friends, family and their network.

2.2.4. Cumulative risk index

Based on the theoretically distinguished risk factors (see the described child- and placement characteristics above) a cumulative risk factor was constructed. Variables measured on interval/ratio scale were dichotomized. For total problem behavior, scores equal to or, depending on the variable, higher or lower than one standard deviation from the mean, were classified as risk. Next, all dichotomized items were summed into a cumulative risk index.

2.3. Missing data management

All cases had one or more missing values. We used three steps to overcome these missing data: 1) Variables with more than 50% missing values (educational level of foster parents and emotional support) were omitted from further analyses. 2) All missings on categorical factors that could be present or absent were recoded as absent, presuming that the existence of these factors would have led to documentation in the case files. 3) Little Mcar test showed that data were missing completely at random, $chi^2/df = 1.29$. Therefore Multiple imputation procedures were used in SPSS for the other variables, assuming missing at random (IBM Statistics, 2011), as this increases the power to make valid inferences about the population of ended foster placements (Schafer & Graham, 2002). Five imputed datasets were created. Variables were imputed as well as used as predictors in the imputation process. All presented data related to the planned and unplanned cases are based on the pooled data.

2.4. Analyses

Descriptive analyses were used to examine the frequency of planned versus unplanned terminations and to give an overview of the characteristics of the cases. In order to evaluate whether foster children who experienced an unplanned termination differ from foster children who had planned terminations on child- and, placement characteristics, firstly, independent t-tests, Mann–Whitney U tests, chi-squared tests, or Fischer exact tests (depending on measurement level) were performed for all cases with a known reason of termination (planned or unplanned). To find predictors of type of termination, we firstly conducted preliminary multilevel analyses to see if the use of multilevel analysis was necessary as a minority of the cases involved cases in the same foster families. As there was no significant variation on foster family level, we used standard logistic regressions to find predictors of type of terminations, including only the variables that appeared significant in the bivariate analyses. For the effect size of the independent variables on the dependent variable, Cohen's *d*, Cramer's V and Pearson's *r* were used (Cohen, 1992). The effect sizes of the Mann–Whitney *U* tests were calculated with the formula $Z / (\sqrt{N})$ (Field, 2013). Comparisons between the unplanned terminated cases and the planned terminated cases regarding the risk accumulation index were conducted using independent t-tests.

3. Results

3.1. Terminations and characteristics of the terminated cases

Of all terminations, 64% (n = 107) were planned, 35% unplanned (n = 57) and of 2% the reason for termination was unknown (n = 4).

Among the planned terminations, 47% (n = 50) left as planned, 44% (n = 47) of the placements ended because the child reached the age of 18, and 9% had other reasons (n = 10). In the majority of the unplanned terminations behavioral problems of the foster child were explicitly given in the file as the reason for termination (54%; n = 31). Eight cases (14%) terminated unplanned because of problems within the foster family (divorce; involved six foster families). Eighteen cases (32%) ended unplanned because of other reasons (e.g., foster organization ended placement, parents ended placement). The four cases with an unknown termination type involved two foster families (resp. 3 and 1 child per family). These cases were excluded from further analyses. The foster child and placement characteristics of the terminated cases (planned and unplanned) are reported in Table 1.

3.2. Comparisons and predicting termination type

Table 1 shows the bivariate comparisons on the foster child and placement characteristics and the related effect sizes (ranging from small to large depending on the specific factor). With respect to child characteristics, there were relatively more children among the unplanned terminated cases with a non-Dutch background, more children who had experienced physical abuse, more attachment problems, more hyperactivity problems, and more externalizing problems than among the planned cases. Regarding placement characteristics, there were more often biological children present in the planned terminated cases than among the unplanned cases. Among the cases with biological children, the smallest age difference and the quality of the relationship between the foster child and biological children were significantly

Table 1
Overview of child and placement characteristics, test results and effect sizes for cases with a known termination type (n = 164).

Variable	Total n = 164	Planned n = 107	Unplanned n = 57	t/χ^2	*df*	ES
Child characteristics						
Gender — male n (%)	70 (43%)	45 (42%)	25 (44%)	0.05	1	.02
Age at beginning of terminated placement in years *M* (*SD*)	9.76 (5.81)	9.31 (6.19)	10.61 (4.98)	−1.36	268404.78	−0.23
Ethnicity foster child n (%)				6.60*	1	.20
Dutch	89 (54%)	66 (62%)	23 (40%)			
Number of prior placements *M* (*SD*)	0.95 (1.19)	0.86 (1.13)	1.14 (1.28)	−1.35	384	−0.23
Time in youth care in months *M* (*SD*)	48.72 (55.08)	52.12 (61.19)	42.33 (41.00)	1.22	921366.33	0.19
Abuse in past n (%)	85 (52%)	54 (51%)	31 (54%)	0.23	1	.04
Physical abuse n (%)	31 (19%)	15 (14%)	16 (28%)	4.79*	1	.17
Sexual abuse n (%)	14 (9%)	9 (8%)	5 (9%)	FE		.01
Emotional abuse (%)	6 (4%)	3 (3%)	3 (5%)	FE		.06
Neglect n (%)	39 (24%)	25 (23%)	14 (25%)	0.03	1	.01
Witness to violence n (%)	36 (22%)	25 (23%)	11 (19%)	0.40	1	.05
Attachment problems n (%)	32 (20%)	14 (13%)	18 (32%)	8.10**	1	.22
Behavior problems						
Internalizing problems — yes	27 (17%)	15 (14%)	12 (21%)	1.34	1	.09
Externalizing problems — yes	39 (24%)	12 (11%)	27 (47%)	26.82***	1	.40
Behavioral problems *M* (*SD*)	0.22 (0.49)	0.15 (0.41)	0.34 (0.59)	−1.08	64.34	−0.39
Emotional problems *M* (*SD*)	0.26 (0.41)	0.25 (0.38)	0.29 (0.46)	−0.47	241	−0.09
Hyperactivity *M* (*SD*)	0.44 (0.66)	0.33 (0.54)	0.65 (0.79)	−2.65**	9441.77	−0.47
Frequency of contact with mother (%)				2727.8		−.10
Never	38 (23%)	28 (26%)	10 (18%)			
Regularly	35 (21%)	22 (21%)	13 (23%)			
Often	91 (56%)	57 (35%)	35 (61%)			
Frequency of contact with father (%)				2522.20		−.15
Never	70 (43%)	52 (49%)	18 (32%)			
Regularly	32 (20%)	19 (18%)	14 (25%)			
Often	62 (38%)	36 (34%)	26 (46%)			
Placement characteristics						
Other (foster)children						
Presence of biological children n (%)	87 (53%)	63 (59%)	24 (42%)	4.20*	1	−.16
Smallest age difference biological child and foster child in months[1] *M* (*SD*)	62.42 (59.73) (n = 83)	72.28 (64.51) (n = 61)	35.09 (31.23) (n = 22)	3.51**	74.01	0.84
Quality of relationship foster child–bio child[1] *M* (*SD*)	1.67 (0.57) (n = 61)	1.80 (0.46) (n = 41)	1.40 (0.68) (n = 20)	2.40*	27.73	.65
Presence of other foster children n (%)	72 (44%)	46 (43%)	26 (46%)	0.10	1	.03
Placement with siblings n (%)	47 (29%)	31 (29%)	16 (28%)	0.02	1	−.01
Type of foster family n (%)				4.41*	1	.16
Kinship	104 (63%)	59 (55%)	41 (72%)			
Type of foster placement n (%)				6.01**	1	.19
Long term	104 (63%)	60 (56%)	43 (75%)			
Short term	60 (37%)	47 (44%)	14 (25%)			
Mean age foster parents at start placement *M* (*SD*)	47.28 (9.82)	47.43 (10.13)	46.98 (9.27)	0.26	669	0.05
Ethnicity Foster Parents n (%)				6.03*	1	.19
Dutch	125 (76%)	88 (82%)	37 (65%)			
Ethnic match foster parent and foster child				0.78	1	.02
None	44 (27%)	28 (26%)	16 (28%)			
(partly) Match	120 (73%)	79 (74%)	41 (72%)			
Number prior foster children *M* (*SD*)	1.71 (3.74)	1.96 (4.17)	1.24 (2.71)	1.17	5097	0.20
Length of foster care experience (months) *M* (*SD*)	82.09 (178.28)	94.93 (197.66)	57.98 (132.78)	1.25	10360	0.22
Number of stressful life events *M* (*SD*)	1.21 (1.56)	0.91 (1.14)	1.79 (2.02)	−3.05**	75.29	−0.50
Parenting stress *M* (*SD*)	0.85 (0.86)	0.59 (0.77)	1.34 (0.80)	−5.20***	91	−0.96
Parenting skills *M* (*SD*)	1.74 (0.58)	1.86 (0.46)	1.51 (0.67)	2.91**	38.09	0.61

Note [1] missing data regarding these variables for subsample with biological children were not imputed. * $p < .05$, ** $p < .01$, *** $p < .001$.

lower in the unplanned termination group than in the planned termination group. Among the unplanned terminated cases were significantly more kinship foster care arrangements and more long term placements than among planned terminated cases. The children in unplanned terminated cases were more often fostered by non-Dutch foster parents, foster parents experienced significantly more stressful life events, had significantly higher parenting stress and significantly less developed parenting skills than foster families in planned terminated cases.

To address the role of the different factors in contributing to predicting the type of termination, logistic regression analysis was used with the significant factors as independent variables and type of termination as the dependent variable (see Table 2). In this analysis, the variables smallest age difference between foster child and biological child and the quality of the contact between these two were not included, as a substantial part of the cases did not have biological children (see Table 1). This full model significantly predicted type of termination (Omnibus $X^2 = 77463.2$, $df = 12$, $p = .000$). The model accounted for between 38% and 52% of the variance in termination type, with correct prediction of 91% of the planned terminations and 66% of the unplanned terminations (overall success rate: 83%). As can be seen in Table 2, ethnicity of the child, externalizing behavior problems and parenting stress of the foster parents reliably predicted type of termination. The values of the coefficients revealed that an increase of one unit in parenting stress was associated with an increase in the odds of an unplanned termination by a factor of 2.74. The odds of ethnicity of the child showed that the cases of non-Dutch foster children were 3.49 times more likely to be terminated unplanned compared to the odds of the cases of Dutch foster children. Externalizing problems are associated with an increase in the odds of unplanned termination by a factor of 3.69.

3.3. Accumulative risk and type of termination

The number of measured risk factors ranged from 5 to 21 per case (the maximum possible number of risk factors was 33 risk factors), with a mean number of 10.52 ($SD = 3.04$) risk factors. In the cases with an unplanned termination a significant higher number of risk factors ($M = 12.34$, $SD = 3.15$) were found compared to the cases with a planned termination ($M = 9.56$, $SD = 2.49$), $t = -5.69$, $df = 4963.52$, $p < .000$ (see also Fig. 1). The accumulated risk index appeared to be a strong predictor of termination type, $B = 0.35$, S.E. = 0.07, Wald Chi-Square = 26.10, $p = .000$, Odds Ratio = 1.42, 95% CI (1.23–1.63). The overall accurate prediction of the model was 76%, with 87% of the planned and 55% of the unplanned terminations predicted accurately (Omnibus chi-square = 33.23, $df = 1$, $p = .000$; the model accounted for between 18% and 25% of the variance in unplanned termination).

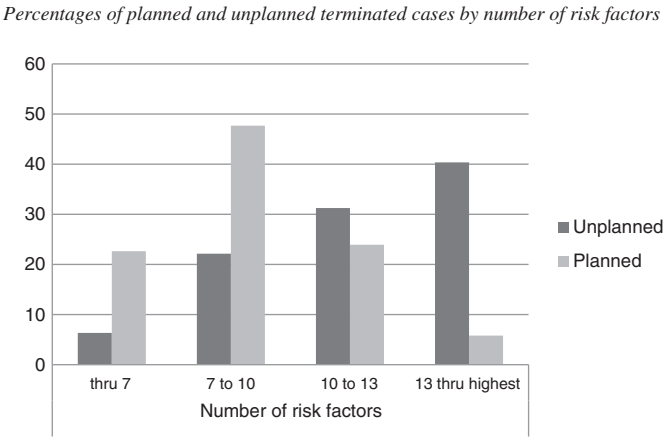

Fig. 1. Percentages of planned and unplanned terminated cases by number of risk factors.

4. Discussion

This study examined the proportion of (un)successful long and short term foster care placements in the Netherlands, the relationships with child and placement characteristics, the predictive power of these significant factors and the role of risk accumulation. A retrospective design with a large time frame using case files was applied.

The results of this study show, first of all, that two third of the placements were successful, i.e. ended according to plan. The proportion of unsuccessful–unplanned terminated-placements, a third of all terminated placements, thus falls within the internationally often cited range of 20–50% (e.g., Minty, 1999). The proportion unsuccessful placements were higher than the 22% previously found in the Netherlands by Strijker et al. (2008). However, it should be mentioned that this study used a different (smaller) time frame and solely included long-term placements.

The second research question focused on the relationships between type of placement termination and foster child and placement characteristics and the predictive power of the factors that had a bivariate significant association with placement outcome. Only a minority of the significant (bivariate) factors were significant predictors. Differences in outcomes in univariate and multivariate analyses were also reported by Oosterman et al. (2007). The significant model explained about half of the variance in termination type and was able to predict 83% of the cases correctly: almost all planned terminations and two third of the unplanned terminations. The latter might imply that there are other risk factors that play a role in the unplanned termination of placements

Table 2
Logistic regression analysis (n = 164).

Variables	*B*	S.E.	Wald chi-square	*p*	Odds ratio	95% confidence interval for odds ratio	
						Lower	Upper
Constant	−1.53	1.27	2.66	.24	0.22	0.02	2.83
Child characteristics							
Ethnicity foster child	1.251	0.59	5.33	.04	3.49	1.09	11.24
Attachment problems	0.79	0.57	2.03	.17	2.21	0.72	6.79
Physical abuse	0.89	0.58	2.53	.12	2.44	0.79	7.59
Externalizing problems	1.30	0.61	4.76	.03	3.68	1.12	12.12
Degree hyperactivity/attention problems	0.32	0.43	0.68	.45	1.38	0.60	3.21
Placement characteristics							
Presence of biological children	−0.20	0.48	0.27	.69	0.82	0.32	2.12
Type of foster family	0.65	0.56	1.56	.25	1.91	0.64	5.70
Type of foster placement	−0.66	0.58	1.40	.26	0.52	0.17	1.61
Ethnicity foster parents	−0.23	0.71	0.70	.75	0.80	0.20	3.23
Number of stressful life events	0.18	0.18	1.11	.31	1.20	0.84	1.71
Parenting stress	1.01	0.38	6.41	.02	2.74	1.24	6.04
Parenting skills	−1.04	0.53	12.23	.06	0.35	0.12	1.06

besides the factors included in this study. Possible other risk factors might be the strength of motivation of the foster parents, contact foster parents with care workers and social support.

In the current study three variables appeared to be significant predictors for placement outcome: ethnicity of the foster child, behavior problems of the foster child, and parenting stress. Cases with a foster child with a non-Dutch ethnic background were (regardless of the ethnic match with foster parents) more likely to end unsuccessful than cases with children with a Dutch ethnic background. Other researchers in this field (Pritchett, Gillberg, & Minnis, 2013) emphasize that ethnicity and social class are substantially interlinked. In the Netherlands children with a non-Dutch ethnic background more often have a lower social class background (De Jong, De Rijk, & Schreven, 2010). According to cumulative risk theory poor resources lead to more risk factors (e.g., Evans & Kim, 2013). Foster children with a non-Dutch ethnic background might have been exposed to more risk factors in their biological families prior to their placement in foster care, than non-Dutch foster children. This exposure might hamper their ability to adjust to the placement and deal with problems, which in turn may possibly cause placement disruption (see Andersen, 2012). Nevertheless, this assumption could not be tested in this study as social class (or SES or poverty levels), nor the number of risk factors in the family of origin) were included.

Besides the non-Dutch ethnic background of the foster child, behavior problems (in line with Oosterman et al., 2007) and parenting stress appear to have (independent) prognostic power related to placement outcome. Cases with foster children with externalizing problems and cases with foster parents with more parenting stress have more chance on an unsuccessful placement. The latter is an important finding as this aspect hasn't been included in most of the studies about disruption. Although problem behavior and parenting stress also independently predict unplanned terminations of foster placements, following transactional, ecological and social interaction models (e.g., Garbarino & Ganzel, 2000; Patterson, 1982; Sameroff, 2009), a bidirectional relationship between parenting stress and behavioral problems, as well as with parenting can be expected. Problem behavior might lead to more parenting stress, specifically if foster parents do not have enough parenting skills to adequately handle their foster children's behavior. Parenting stress might also lead to less effective parenting, which might result in more problem behavior. Problem behavior of a foster child might result in negative interaction patterns, where both foster children and foster parents try to coerce the other to act the way they would like (coercive circles; Patterson, 1982), resulting in less effective parenting by foster parents, more problem behavior (see also Vanderfaeillie, Holen, Vanschoonlandt, Robberechts, & Stroobants, 2012) and probably more parenting stress. Already existing behavioral problems at entering a foster family due to the often adverse and traumatic history (e.g. Oswald et al., 2010), might become worse due to negative interaction patterns in the foster family. Thus, the interaction between parenting stress and behavior problems seems to be important in the dysregulation of (foster)family processes

Despite the fact that bivariate comparisons and the regression analysis showed a reduction of the number of significant factors, the other factors do seem to be important when looking at risk cumulation: unsuccessful placements are related to the number of risk factors. This suggests that the cumulation of risk factors contributes to a stressful situation within the foster family, increasing the probability of placement disruption. This is in line with the theoretical perspective on risk cumulation that emphasizes that the accumulation of risk factors (proximal and or distal) deregulates the child-rearing process and negatively influences the developmental outcomes of children (e.g., Sameroff, 2009; Staal, Hermanns, Schrijvers, & Van Stel, 2013). Moreover, this shows that this perspective also holds within a by definition high risk sample (see also Raviv et al., 2010). These latter findings suggest that it might be useful to monitor foster placements regarding the number of risk factors, to offer timely support for cases with an increased number of risk factors. In this way the limited resources of foster care might be allocated more effectively, resulting in more timely support for both foster parents and foster children (see also Raviv et al., 2010).

Looking at the content of the risk factors, we would advise foster organizations to be alert on placements with foster children with a non-Dutch ethnic background. However, more research is necessary to understand the underlying mechanism. Furthermore, behavior problems and parenting stress are changeable (to a certain extent) and therefore offer the possibility to intervene on these factors. A series of recent reviews and a meta-analysis on intervention programs for foster families found a wide variety of existing programs (e.g., Incredible years, Parent Child Interaction Therapy (PCIT), Keeping Foster and Kin Parents Supported and Trained (KEEP), see Dorsey et al., 2008). These interventions vary in terms of the moment of intervention (pre-placement training for future foster parents vs interventions during placement), foster-care specificity of the programs (programs specifically developed or adapted for use with foster families vs general programs), focus of the intervention (foster carer, foster child, combination), setting (school, day-care, home), intensity and duration (Dorsey et al., 2008; Leve et al., 2012; Rork & McNeil, 2011; Van Andel, Grietens, Strijker, Van der Gaag, & Knorth, 2014). Moreover, in reviews and meta-analyses the limited empirical evidence and the difficulties with drawing conclusions regarding the effectiveness of the studied programs due to methodological limitations is emphasized (e.g., lack of: rigorous design, small sample size, single informants, lack of information on program fidelity information, lack of long term follow-up studies; Dorsey et al., 2008; Leve et al., 2012; Rork & McNeil, 2011; Van Andel et al., 2014). Further research with solid methodological designs is necessary to gain more empirical evidence and gain insight into the best interventions to prevent problem behavior, reduce parenting stress, and overcome unsuccessful placements.

Some methodological aspects of this study need consideration. First, in this study we operationalized a successful placement as a placement according to plan. It should, however, be noted that every move, also a move after a successful placement, might cause distress (see also Strijker et al., 2008). Nevertheless, we assume the distress for the foster child and foster family to be lower in the planned cases as the transition is planned and more prepared. Second, a limitation of this study involves the type of information used: the case file reports of the foster care organizations. In analyzing existing documents the “content analyses can only be as good as the documents” (Bryman, 2008, p. 291). In some cases the files did not include all the information necessary for this study or information was difficult to extract from the files (especially regarding support and educational level of the foster parents) (see also Vanderfaeillie, Van Holen, & Coussens, 2008). Additional consultation with the foster care organization sometimes led to complementary information. However, there were still many missings in the initial data. Furthermore, some constructs, like parenting skills and parenting stress, were only assessed with one item. Although the operationalization of the possible answer categories for parenting skills and parenting stress involved multiple aspects (parenting skills: limit setting, offering structure and being consequent; parenting stress: conflicts, hard to parent), measuring these constructs respectively with multiple items regarding several aspects of parenting skills and parenting stress might give a more adequate picture and give more insight for interventions. Also, the case files used provide the impressions of the case workers, which might be different from the experiences of foster parents (and foster children) themselves, due to differences in interpretations, selective disclosure by the foster parents, or as a consequence of the different roles they have. Next, this study has a retrospective design, conducting a prospective study, where we could select and monitor which variables should be included in the case files, could result in more complete and detailed information. Moreover, this would also make it possible to include more variables like resilience and other possible protective factors, as well as social class (SES/poverty level) of the biological family of the foster child. The latter would make it possible to see if indeed the predictive

power of the ethnicity of the child could be explained by previous poor resources. Also, observations of child behavior could be added to this prospective study. Finally, this study gives insight into risk factors playing a role in the disruption of placements, however, longitudinal research is necessary to understand the underlying mechanisms.

Notwithstanding these limitations, the present study provides unique information on the relationship between foster child and placement characteristics and (un)successful placements and the role of cumulative risk. This study shows that although planned otherwise a substantial number of foster children in short and long term placements experience unplanned terminations of their placements. Behavior problems and ethnicity of the foster child are important risk factors, as is parenting stress among foster parents. This emphasizes the challenge for foster care professionals to get insight in (the cumulative) risk factors prior to the placement, to take care for an optimal match with a foster family regarding those risk factors (which specific foster family matches the best to meet the specific risks and needs of this foster child?), to monitor foster placements regarding the number of risk factors and to offer foster parents (and their foster children) timely support to reduce parenting stress and to help them to more effectively cope with the problematic behavior of their foster child.

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