Who Cares?! Baseline profiles and child development in different 24-h settings

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Citation

Opmeer, H. (2018, September 26). *Who Cares?! Baseline profiles and child development in different 24-h settings*. Retrieved from https://hdl.handle.net/1887/66107

Version: Not Applicable (or Unknown)

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Cover Page

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Author: Opmeer, H.
Title: Who Cares?! Baseline profiles and child development in different 24-h settings
Issue Date: 2018-09-26

Who cares?!

Baseline profiles and child development in different 24-h settings

Harmke Leloux-Opmeer

WHO CARES?!

BASELINE PROFILES AND CHILD DEVELOPMENT IN DIFFERENT 24-H SETTINGS

HARMKE LELOUX-OPMEER

WHO CARES?! BASELINE PROFILES AND CHILD DEVELOPMENT IN DIFFERENT 24-H SETTINGS

Thesis, Leiden University, the Netherlands

ISBN: 978-94-6375-016-5
Author: Harmke Leloux-Opmeer
Printing: Ridderprint BV, www.ridderprint.nl
Cover design: Mariël Lam bno, ’s-Hertogenbosch
Cover art: IdeaBug Media: http://ideabugmedia.com

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WHO CARES?!

BASELINE PROFILES AND CHILD DEVELOPMENT IN DIFFERENT 24-H SETTINGS

PROEFSCHRIFT

ter verkrijging van
de graad van Doctor aan de Universiteit Leiden,
op gezag van de Rector Magnificus prof. mr. C.J.J.M. Stolker,
volgens besluit van het College voor Promoties
te verdedigen op woensdag 26 september 2018
klokke 15.00 uur.

door

HARMKE OPMEER

Geboren te Almelo
in 1979

PROMOTIECOMMISSIE

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This study was funded by the Reformed Civil Orphanage Rotterdam, the Netherlands. This foundation is fully independent and will not receive any benefit from the research results.

CONTENTS

CHAPTER 1	General Introduction	7
CHAPTER 2	Characteristics of Children in Foster Care, Family-style Group Care, and Residential Care: A Scoping Review	17
CHAPTER 3	Children referred to Foster Care, Family-style Group Care, and Residential Care: (How) do they Differ?	37
CHAPTER 4	Similarities and Differences in the Psychosocial Development of Children Placed in Different 24-h Settings	53
CHAPTER 5	Discriminating Baseline Indicators for (Un)favorable Psychosocial Development in Different 24-h Settings	71
CHAPTER 6	General Discussion	91
REFERENCES		105
APPENDICES	Summary in Dutch (*Nederlandse samenvatting*)	125
	Acknowledgements (*Dankwoord*)	133
	Curriculum Vitae	135
	List of Publications	137

1 GENERAL INTRODUCTION

INTRODUCTION

The number of children suffering from maltreatment or other adverse childhood experiences is exceedingly high (Gilbert et al., 2009; World Health Organization, 2014). For example, the World Health Organization (2014) estimated that in Europe alone 117 million children suffer from sexual, physical, or mental abuse. Such adverse developmental circumstances have intrusive health and social impacts throughout a child's life-course and result in, among other things, frequent and long-term service usage (Garland, Landsverk, Hough, & Ellis-Macleod, 1996; Gilbert et al., 2009; World Health Organization, 2014). One of the services that is often used for children living in such circumstances is (24-h) out-of-home care (Bhatti-Sinclair & Sutcliffe, 2012; Pinto & Maia, 2013; Vanschoonlandt, Vanderfaeillie, Van Holen, De Maeyer, & Robberechts, 2013). However, a considerable number of children do not seem to benefit from the out-of-home care services provided; this is suggested by the reported number of children who experienced a placement breakdown, which varies from 20 up to even 80% of children who required such services (e.g., Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007; Van den Bergh & Weterings, 2010). In addition, the costs of youth care services recently soared to unsustainable levels. Both issues resulted in an urgent call for reform of the youth care system (e.g., Bosscher, 2014; Fegert & Stötzel, 2016; Klag et al., 2016; Menozzi, 2016; World Health Organization, 2014), implying greater emphasis on preventive and in-home (support) services, as well as a reduction in the use of (specialized) out-of-home care and a simultaneous increase in the quality of the remaining specialized 24-h care services (Bosscher, 2014; Courtney, 2000; Hilverdink, Daamen, & Vink, 2015).

One way to increase the effectivity and efficiency of out-of-home care services is to optimize the matching between development-threatening conditions or characteristics at the time of admission, and the ability of the various types of out-of-home care to effectively address these baseline circumstances. This thesis aims to contribute to the optimization of this matching. Its objective is to identify the relevant baseline child and family characteristics of out-of-home- placed children in the various 24-h settings and to link these characteristics to (positive respectively negative) psychosocial development of children in the assigned 24-h setting. Such knowledge can provide building blocks for the development of decision-making strategies to improve matching.

This introduction begins by providing a short overview of the development of child and youth care principles and legislation in European countries in general and the Netherlands in particular. The types of out-of-home care services and their utilization and allocation principles are subsequently discussed. Finally, the model that underlies this thesis is presented, and the relevance, objective and overview of this study are outlined.

DEVELOPMENT OF YOUTH CARE AND CHILD PROTECTING SERVICES

The development of child and youth care principles

In European countries, from the 19th century onwards, the state increasingly assumed responsibility for taking care of children who lacked adequate parental care. Large institutions were established to provide alternative care for poor, disabled, retarded, or mentally ill children and those from dysfunctional families (Costa, 2012; Knorth, Evenboer,

& Harder, 2016). Subsequently, in 1901, the first Dutch Children's Act was adopted, which is often considered to be the foundation of the Dutch youth care and child protection system (henceforth, "youth care system"). The Act enabled governmental authorities to intervene in parental authority in cases of severe child maltreatment or neglect, and it became possible to refer a child to out-of-home care in such cases (Knorth et al., 2016). However, since the emergence of Bowlby and Ainsworth's attachment theory (Ainsworth, 1969; Bowlby, 1952; Bretherton, 1992), large institutions have increasingly become subjects of criticism due to their impersonal nature, their social, emotional and geographical isolation, and the lack of attention that they demonstrate to children's rights and developmental needs (Costa, 2012; Newton, 2017; Van IJzendoorn et al., 2011). Due to their use of 24-h shift staff, these institutions were considered to be unable to meet children's need for stable, continuous, and close relationships with (substitute) caregivers, which are required to develop secure attachment (Bowlby, 1952; Whittaker, Del Valle, & Holmes, 2015). For this reason, but also to reduce costs, from the 1970s onwards, (family) foster care increasingly became the placement of choice. Foster care most closely resembles family-life, and a child has a greater likelihood of developing a continuous and close relationship with a substitute caregiver (Bowlby, 1952;Roy, Rutter, & Pickles, 2000; Whittaker et al., 2015). Along the same lines as this paradigm shift, the United Nations Convention on the Rights of the Child was adopted on 20 November 1989 (United Nations, 1989). This Convention states that every child has the right to grow up in a supportive, protective, and caring environment. Thereafter, in 2009, the United Nations Guidelines for the alternative care of children (henceforth, "U.N. guidelines"), which officially state that a least restrictive and family-oriented setting is preferred in cases of out-of-home placement, were adopted (United Nations, 2009, December 18).

The development of Dutch child and youth care legislation

The aforementioned youth care principles are also reflected in the development of Dutch legislation on youth care services. In 1989, the legal framework for Dutch youth care services was stipulated by the (first) Youth Care Act. A core principle of this Act was the "so-so-so policy," which implied that youth care services should be provided as least restrictive as possible (preferably at home), as close to home as possible (preferably regional), as briefly as possible, and as soon as possible (preferably preventively) (Knorth et al., 2016; Scholte, 2002). This was accompanied by a reduction of appreciation for residential care and a decline in the availability of this type of care (Knorth et al., 2016).

In 2005, the Youth Care Act of 1989 was revised, with the intention of shifting to a (more) client-oriented and coherent approach to providing youth care services by offering one central access point per province. This was intended to support collaboration between provinces, municipalities, youth mental health care services, and child protection services in order to ultimately result in less bureaucracy and greater efficiency (Bosscher, 2014; Ross-Van Dorp & Donner, 2005). Both the preventive (i.e., early intervention, care coordination, and referral to specialized care) and specialized youth care services (i.e., youth care-, mental health-, and child protection services) received central access points. The access points for preventive youth care services were the Youth and Family Centers, while the specialized

youth care services could be accessed through the Provincial Youth Care Agencies. Despite these reformations, the Dutch youth care system remained fragmented, and referrals to youth care services were still provided in different ways, depending on the type of care required (Bosscher, 2014).

For these reasons, a new Dutch Youth Act came into force on 1 January 2015; its objective is to provide one all-encompassing law for all youth care services in order to make the Dutch youth care system more efficient, coherent, transparent, and cost-effective (Bosscher, 2014). Since then, local municipalities have become responsible for the entire continuum of youth care services, ranging from preventive to specialized youth care services for children and families with all kinds of problems. This is described as the *transition* of responsibilities. In addition to this, a *transformation* of the system is sought, including a shift towards emphasizing normal development, the empowerment of children, parents, and their social environments, and preventive and early support instead of an emphasis on the use of specialized youth care services (Bosscher, 2014; Hilverdink et al., 2015).

Despite the fact that providing specialized residential care runs counter to the current objectives of youth care services identified above, it still appears to be a necessary component of (24-h) out-of-home care services, as evidenced by the frequency with which this type of care is used (Huefner, James, Ringle, Thompson, & Daly, 2010; James, 2006; James, Zhang, & Landsverk, 2012). This is particularly true for children with high treatment needs (Butler & McPherson, 2007; De Swart et al., 2012; Huefner et al., 2010). Similarly, the U.N. guidelines state that a (temporary) residential placement can be applicable in ”cases where such a setting is specifically appropriate, necessary, and constructive for the individual child concerned and in his/her best interests” (United Nations, 2009, December 18, par. 21). To provide an overview of the underlying differences between the main types of out-of-home care, the continuum of out-of-home care services is briefly discussed below.

TYPES AND UTILIZATION OF OUT-OF-HOME CARE SERVICES AND THEIR ALLOCATION PRINCIPLES

The continuum of out-of-home care services

Generally speaking, out-of-home care settings can be classified with reference to their underlying principles (family-based versus group-based), levels of restrictiveness, and levels of intensity (Barth, 2002; James, 2006; Petrowski, Cappa, & Gross, 2017). When doing so, a continuum of care services emerges, ranging from the least restrictive 24-h services (e.g., kinship or non-kinship foster care) to alternative family-based group homes (e.g., family-style group care) to several types of more intensive and restrictive residential treatment care (e.g., open residential care or secure residential care) (Barth, 2002; Huefner et al., 2010; Washington State Department of Social and Health Services: Children's Administration, 2014).

In cases of (family) foster care, problematic family circumstances are usually the main reason for a child being placed in a foster family, in order to provide for his or her safety (Strijker, Knorth, & Knot-Dickscheit, 2008). In such a situation, a child will be taken care of by volunteer foster parents, who may or may not be familiar with him or her (kinship or non-kinship foster care). In cases of short-term foster care, the biological parents are supported in

addressing any family issues, with the intention of reuniting them with their child. When reunification is not an option, a child will remain in long-term foster care until the age of 18 (Strijker et al., 2008). In contrast to the foster care process in the United States, adopting a foster child is rather unusual in the Netherlands and other European countries (Holtan, Handegård, Thørnblad, & Vis, 2013).

Family-style group care is a lesser known type of family-based care is. This is partly due to the heterogeneity of terminology used for this setting, such as teaching family-homes, SOS children's village's, family houses, socio-pedagogical homes, and family-type homes (Frensch & Cameron, 2002; Harder, Zeller, Lopez, Köngeter, & Knorth, 2013; Lee & Thompson, 2008; Ringle, Ingram, & Thompson, 2010; Van IJzendoorn et al., 2011; Whittaker et al., 2015). In family-style group care, a child is cared for by pedagogically trained group parents, who live at the setting and provide daily professional supervision to approximately six to eight children (Ringle et al., 2010; Whittaker et al., 2015).

Finally, (therapeutic) residential care encompasses several types of group-based settings which differ in their levels of intensiveness and restrictiveness, ranging from non-secure residential to secure residential to inpatient (forensic) psychiatric care (Barth, 2002). Children are generally referred to residential care when they have, among other things, substantial problems in terms of social, behavioral, and school functioning (Chor, McClelland, Weiner, Jordan, & Lyons, 2012; Whittaker et al., 2015). Residentially placed children are supervised by 24-h shift staff in residential treatment settings, which often feature an incorporated school for special education.

The utilization of out-of-home care services

Globally, approximately 2.7 million children under the age of 18 live in residential care, which corresponds to 120 children per 100,000. No global estimation can be made for foster care due to a lack of sufficiently reliable administrative data on numbers of foster children over the world (Newton, 2017; Petrowski et al., 2017). The preference to refer to a family-based or group-based setting differs between several regions in the world, partly due to differences in historical trajectories and societal views. In African societies, for example, many children are fostered in informal kinship foster care because of a deep-rooted conviction that the care and upbringing of children is a shared family responsibility. By contrast, for Eastern and Central Europe 666 children per 100,000 are placed in residential settings, which is five times more frequently compared to the global average (Petrowski et al., 2017).

In the Netherlands, almost 34,000 children resided in out-of-home care at the end of 2016 (Centraal Bureau voor de Statistiek, 2017); this corresponds to 997 children per 100,000. The majority of Dutch out-of-home placed children under the age of 18 lived in foster care (53%), and a much smaller number (10%) in alternative family-oriented settings such as family-style group care. A significant number (38%), however, were placed in non-secure residential care (Centraal Bureau voor de Statistiek, 2017). In contrast, in the United States, the majority of children were placed in a foster family (75%), while another 6% lived in (family-based) group homes. Only 8% resided in residential care (Child Welfare Information Gateway, 2017).

Closely related to the utilization of the various types of out-of-home care are the principles upon which referral is based, which are discussed below.

Allocation principles in out-of-home care

With regard to the allocation of children to a certain type of out-of-home care, three related underlying issues can be distinguished. At first, as previously outlined, the prevailing view is that, in the case of an out-of-home placement, the setting should be as least restrictive as possible. Today, however, this guideline seems to be overemphasized, resulting in a sense of obligation on the part of child welfare caseworkers to provide the least restrictive type of care first (usually foster care). It is only when such care proves to be ineffective that a more restrictive and intensive setting is perceived as being justified. This "scale-up" principle is referred to as "stepped care" (Van der Feltz-Cornelis, Van Marwijk, Hakkaart-van Roijen, Carvalho, & McIntyre, 2017). The downside of this stepped-care principle is, however, the implication that the least-restrictive guideline should have priority over the specific needs and possibilities of a child and his or her individual situation (Sunseri, 2005; Whittaker et al., 2015). In addition to this, allocation is also affected by other factors, such as resource availability (Broeders, Van der Helm, & Stams, 2015; Frensch & Cameron, 2002; Huefner et al., 2010), or local policy (Barth, 2002; Bhatti-Sinclair & Sutcliffe, 2012; Huefner et al., 2010; James, Landsverk, & Slymen, 2004; Newton, 2017). Third, the absence of clear placement criteria for the various types of (non-secure) out-of-home care hampers a well-informed choice concerning a certain type of care (Chor et al., 2012; Lee, 2010; Strijker, Zandberg, & Van der Meulen, 2002).

All of the issues related to allocation increase the likelihood of a mismatch between baseline child and family characteristics on the one hand and the care referred to on the other, subsequently increasing the risks of placement instability (Chor et al., 2012; Vanderfaeillie, Damen, Pijnenburg, Van den Bergh, & Van Holen, 2016; Whittaker et al., 2015). This placement instability in turn negatively affects a child's development, which further increases the risk of a subsequent unplanned placement breakdown (Webster, Barth, & Needal, 2000). Finally, this negative coercive process heightens the risk of unfavorable placement outcomes (James, Zhang et al., 2012; Newton, Litrownik, & Landsverk, 2000; Oosterman et al., 2007). Based on data from the literature, placement breakdowns are a common phenomenon across all types of care, in which percentages ranging from 20 up to even 80% (Jakobsen, 2013; Oosterman et al., 2007; Van den Bergh & Weterings, 2010; Ward, 2009). This suggests that inaccurate matching likely occurs in all types of out-of-home care.

The principle of matching between baseline child and family characteristics and a certain type of care is known as "matched care" (Boyd, 2016; Williams & Martinez, 2008). An example of a model that uses this matched-care principle is the risks-needs-responsivity (RNR) model developed by Andrews, Bonta, and Wormitmulh (2011), which is used in (forensic) psychiatric care and secure residential care (Buitelaar, Ferdinand, Posthumus, & Buitelaar, 2016; ter Beek, van der Rijken, Kuiper, Hendriks, & Stams, 2017; Vermaes, Konijn, Jambroers, & Nijhof, 2014). Using this model, it is possible to determine who is at risk and should be treated (the risk principle); what should be treated, since it is related to the outcome (the need principle); and how it should be treated (the responsivity principle) (Bonta & Andrews, 2007). The principles of the RNR model are expected to serve well for the

development of a decision-making tool for referral to out-of-home care. By investigating which baseline child and family characteristics (in short “baseline factors”) are related to favorable and unfavorable outcomes, it becomes clear which baseline factors (the needs) should be considered at the time of admission. In addition, by specifically linking these baseline factors only to unfavorable outcomes in every type of 24-h care (the risks), it reveals who requires additional specific treatment. Finally, by identifying the relationship between the baseline factors and a favorable result, it suggests which type of care is preferable under certain circumstances (responsivity). In this manner, the baseline factors identified can be used as building blocks for the development of such a decision-making tool for referral to a certain type of non-secure 24-h out-of-home care.

Several attempts have previously been made to develop such a decision-making tool, such as the development of the child and adolescent severity of psychiatric illness (CAPSI) questionnaire (Lyons, Libman-Mintzer, Kisiel, & Shallcross, 1998), the child and adolescents needs and strengths (CANS) algorithm (Lyons, 2009), and the children and adolescent service intensity instrument (CASII) (Fallon et al., 2006). However, according to Chor et al. (2012) there is still much to be learned about referral processes.

RELEVANCE, OBJECTIVE AND OVERVIEW OF THIS THESIS

Relevance of research on out-of-home care

Research on out-of-home care is considered to be important, as evidenced by the many studies that have been conducted on this subject. Nevertheless, a number of issues require ongoing attention. First, out-of-home placement is an intrusive intervention in a child’s life and could be traumatic on its own (e.g., Bruskas, 2008; Racusin, Maerlender, Sengupta, Isquith, & Straus, 2005; Schneider & Phares, 2005). It is therefore only justified when other, less intrusive, in-home services or day-treatment programs are considered to be insufficiently able to effectively address risky circumstances (Huefner et al., 2010; Pinto & Maia, 2013; Vanschoonlandt et al., 2013). Second, out-of-home care is a very expensive intervention, especially when it comes to professional family-based or group-based treatment (Barth, 2005). However, the global number of children receiving child-protecting services, and the related costs, continue to increase (Fegert & Stötzel, 2016; Klag et al., 2016; Menozzi, 2016; Withington, Burton, Lonne, & Eviers, 2016). In the Netherlands in particular, the demand for specialized youth care services increases by approximately 10% every year (Hilverdink et al., 2015). A third issue with regard to out-of-home care is the contradiction between the aim of minimalizing or even abolishing the use of residential care and the large number of children who still use this type of care. To reduce the utilization of residential care, it would be helpful to gain insight into the baseline characteristics of children who actually benefit from such services (Connor, Miller, Cunningham, & Melloni, 2002; Klag et al., 2016). Finally, according to the literature data, a significant proportion of children placed in all types of out-of-home care do not benefit from the services received and some even deteriorate during placement (Boyer, Hallion, Hammell, & Button, 2009; Goemans, van Geel, & Vedder, 2015; Lawrence, Carlson, & Egeland, 2006; Van IJzendoorn et al., 2011; Vanderfaeillie, Van Holen, Vanschoonlandt, Robberechts, & Stroobants, 2013). Altogether, these key issues justify the objective of this thesis.

Objective and overview of this thesis

The primary objective of this thesis is to contribute to knowledge on baseline child and family characteristics prior to or soon after admission and their link(s) to children's psychosocial development during the first year of placement. According to the literature data (Anderson, Lyons, Giles, Price, & Estle, 2003; Scholte, 1997; Strijker et al., 2002) and based on the guidelines for reforming the youth care system set by the Netherlands Youth Institute (Bosscher, 2014), obtaining greater insight into these baseline factors would be a first step in supporting the development of well-informed decision-making strategies. The baseline factors related to children's psychosocial development can be used as building blocks for the development of decision-making strategies for referral to out-of-home care and for suggestions for additional treatment during placement. This could improve the match between the attending baseline factors on the one hand and the type of 24-h care assigned, combined with additional interventions, on the other. The improvement of such a match would subsequently contribute to the enhancement of the efficiency and effectiveness of 24-h out-of-home care.

To systemize and summarize the building blocks identified, an adapted version of Kerig, Ludlow, and Wenar's model (2012) is used in this study (see Figure 1).

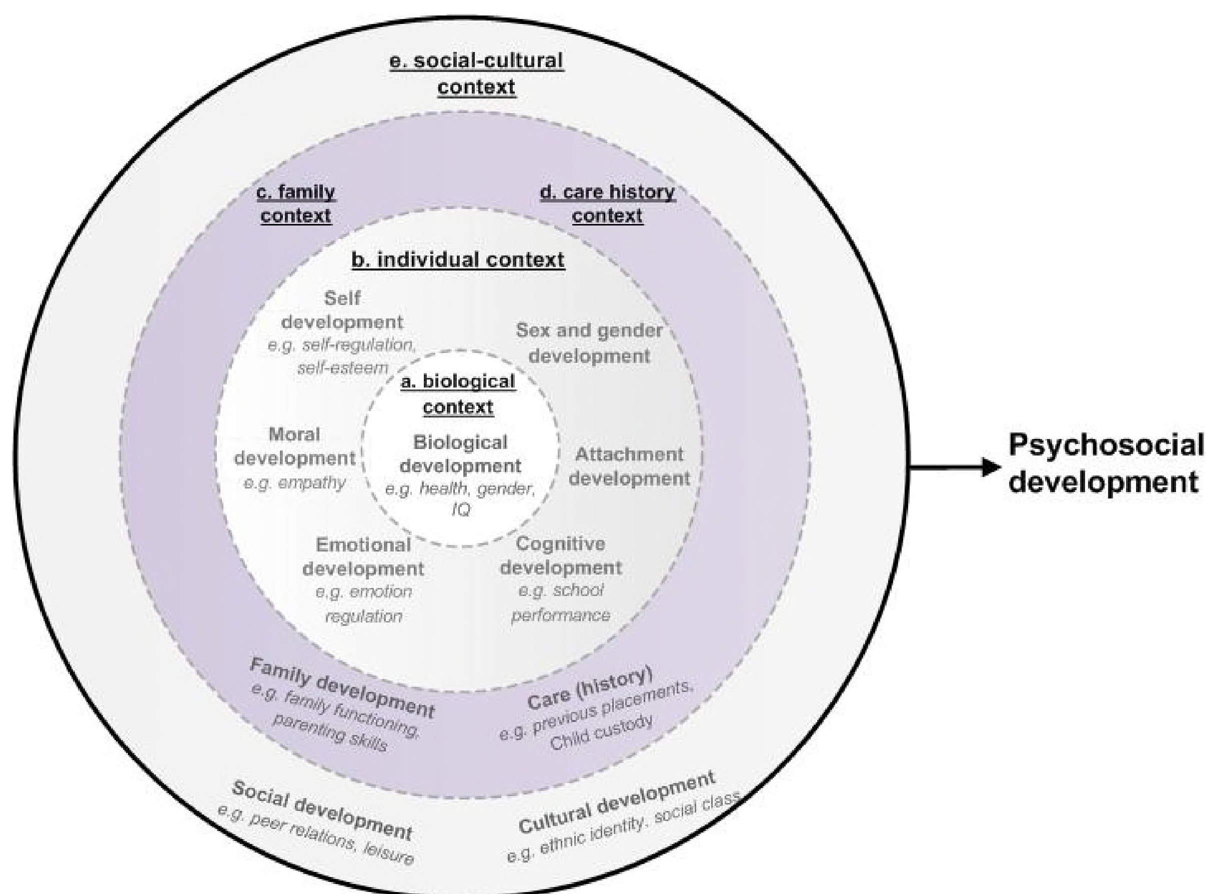

Figure 1. Adapted model of the developmental processes during a child's psychosocial development from Kerig et al. (2012).

The central assumption in the transactional developmental model of Kerig, Ludlow, and Wenar (2012) is that a child's development is determined both by a series of successive developmental processes and the continuous dynamic interaction between that child and his or her developmental contexts during these processes. The model distinguishes between several developmental contexts, namely (a) biological, (b) individual, (c) family, (d) care history, and (e) social-cultural.

For the purpose of conciseness, some developmental contexts are combined in certain chapters. Furthermore, it should be noted that some degree of overlap between Chapters 2 to 5 is inevitable, as each of these chapters is based on a study which can be read separately. This thesis is structured as follows:

Chapter 2 discusses the findings of a scoping review on the baseline child and family characteristics of children placed in foster care, family-style group care, and residential care.

Chapter 3 reports on the findings of a comparison of the child, family, and care characteristics of 200 Dutch primary school-aged children at the time of admission to one of the three main types of out-of-home care distinguished previously. The findings contribute to knowledge of the baseline child and family characteristics of children placed in out-of-home care and, more specifically, provide insight into the similarities and differences between children placed in the three main types of care.

Chapter 4 presents the findings of a study that focused specifically on the similarities and differences in the short-term psychosocial development (internalizing, externalizing, and total behavior problems) of a sample of 121 Dutch primary school-aged children one year after their initial placement in foster care, family-style group care, or residential care. In order to make a sound comparison, the severity of their psychosocial problems at the time of admission is also taken into account in this study. A child's psychosocial development is known to be a central outcome variable in outcome studies (Goemans et al., 2015).

Chapter 5 reports on the findings of a study in which a set of baseline factors is related to favorable or unfavorable psychosocial development of the children in the aforementioned sample during their first year of placement in foster care, family-style group care, and residential care. According to the literature data, the use of a set comprising multiple factors is recommended because of the likelihood of a cumulative effect of baseline (risk) factors being present (Farmer, Mustillo, Burns, & Holden, 2008; Greenbaum et al., 1996).

Finally, **Chapter 6** presents a general discussion of the findings of the empirical studies in relation to the literature data. The baseline factors nominated as building blocks for decision-making strategies are discussed, in addition to their implications for practice and policy. Furthermore, recommendations for future research are suggested, taking into account the limitations of the studies.

2

Characteristics of Children in Foster Care, Family-Style Group care, and Residential Care: A Scoping Review

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Journal of Child and Family Studies (2016), *25*(8), 2357-2371

ABSTRACT

When risky child and family circumstances cannot be resolved at home, (temporary) 24-hour out-of-home placement of the child may be an alternative strategy. To identify specific placement risks and needs, care professionals must have information about the child and his or her family, care history, and social-cultural characteristics at admission to out-of-home care. However, to date information on case characteristics and particular their similarities and differences across the three main types of out-of-home settings (namely foster care, family-style group care, and residential care) is largely lacking. This review compiles and compares characteristics of school-aged children of average intelligence and their families at the time of each child's admission to one of the three care modalities. A scoping review technique that provides a broad search strategy and ensures sufficient coverage of the available literature is used. Based on the 36 studies included, there is consensus that the majority of normally intelligent children in care demonstrate severe developmental and behavioral problems. However, the severeness as well as the kinds of defining characteristics present differ among the children in foster care, family-style group care, and residential care. The review also identifies several existing knowledge gaps regarding relevant risk factors. Future research is recommended to fill these gaps and determine the developmental pathway in relation to children's risks and needs at admission. This will contribute to the development of an evidence-based risks and needs assessment tool that will enable care professionals to make informed referrals to a specific type of out-of-home care when such a placement is required.

INTRODUCTION

The United Nations Convention on the Rights of the Child states that every child has the right to live with his or her parents or to stay in touch with them, unless this would harm the child's development (United Nations, 1989). It also states that every child has the right to grow up in a supportive, protective, and caring environment that promotes his or her full potential. Positive child development is sometimes compromised by development-threatening child characteristics, adverse family circumstances, or interactions between both areas. When these risky circumstances cannot be effectively addressed by appropriate outpatient support, 24-hour out-of-home placement of the child is usually considered a meaningful strategy for remediating the developmental risks (Bhatti-Sinclair & Sutcliffe, 2012; Huefner, James, Ringle, Thompson, & Daly, 2010; Pinto & Maia, 2013; Vanschoonlandt, Vanderfaeillie, Van Holen, De Maeyer, & Robberechts, 2013).

Out-of-home (24-hour) care consists of a continuum of intensive and restrictive care services, which range from lower-level family-based settings (e.g., relative foster care) to family-style group care to several types of residential treatment care (Huefner et al., 2010). Residential treatment centers in turn also reflect a continuum of services that vary from open residential to secure residential to inpatient psychiatric care (Barth, 2002). Secure residential care seems to be especially preferred in juveniles with persistent aggressive behavior problems (Vermaes & Nijhof, 2014), whereas inpatient psychiatric care is reserved for children who additionally display psychotic or suicidal behavior (Curtis, Alexander, & Lunghofer, 2001; Huefner et al., 2010). In family-style group care, children live in home-like settings with live-in workers (Lee & Thompson, 2009). This kind of care can be viewed as an intermediate setting between foster and residential care (Barth, 2002; Huefner et al., 2010; Rouvoet, 2009).

In accordance with the United Nations Guidelines for the Alternative Care of Children (henceforth "UN guidelines"), foster care or other family-based settings are the predominant types of care when out-of-home placement is required (United Nations, 2009, December 18). These settings are considered to be most consistent with the best interests and needs of the child (Courtney, 1998; Doran & Berliner, 2001; Harder, Zeller, Lopez Lopez, Köngeter, & Knorth, 2013). However, little scientific evidence is available to support the recommendation to place children in family-based settings such as foster care (Bartelink, 2013; Grietens, 2012; Hussey & Guo, 2002). In addition, one-third to one-half of foster children experience serious placement disruptions (Scholte, 1997; Van den Bergh & Weterings, 2010; Van Manen, 2011). These placement disruptions have negative impacts on children's well-being and functioning. They also increase the risk of behavioral and emotional problems and heighten the likelihood of new (placement) breakdowns in subsequent foster families (Doran & Berliner, 2001; Newton, Litrownik, & Landsverk, 2000; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007; Strijker, Knorth, & Knot-Dickscheit, 2008). One of the main reasons for breakdowns in foster care is the child's level of externalizing behavior problems (Barber & Delfabbro, 2002; Newton et al., 2000; Strijker et al., 2008; Vanschoonlandt, Vanderfaeillie, Van Holen, & De Maeyer, 2012). Several researchers have therefore suggested that children with certain specific (treatment) needs are better off when they are placed directly in a more restricted treatment setting such as residential care (Barber,

Delfabbro, & Cooper, 2001; Butler & McPherson, 2007; De Swart et al., 2012; Doran & Berliner, 2001; Hussey & Guo, 2002; Scholte, 1997). Similarly, the UN guidelines state that residential care is applicable “for cases where such a setting is specifically appropriate, necessary and constructive for the individual child concerned and in his/her best interests” (United Nations, 2009, December 18, p. 5). This statement implies that individual and contextual characteristics at the time of admission will partly determine which setting across the continuum of out-of-home care services is most appropriate. However, information on similarities and differences in a child’s attending risk factors and needs at the time of admission to a certain type of out-of-home care is to date largely unavailable or ambiguous (Barth, 2002).

This paper compiles and compares child, family, care history, and social-cultural characteristics at admission of children who are placed in three of the main types of out-of-home care (namely foster care, family-style group care, and residential care). A scoping review technique is used to (1) chart case characteristics of normally intelligent children (aged 6-12 years) placed out-of-home in one of the three main care modalities, (2) define similarities and differences among those characteristics, (3) determine the severity of the child and family’s problems, and (4) identify the existing knowledge gaps within research on this particular population. The results of this scoping review will help practitioners and policy makers to be aware of specific risk factors and needs associated with children placed out-of-home, which might promote positive child development and reduce the risk of placement breakdowns. In addition, knowledge of these factors may contribute to the increased demand for an evidence-based assessment tool to determine these specific risks and needs of disturbed children; such as the risk-need-responsivity model of Andrews, Bonta, and Wormith (2011).

METHOD

We considered a scoping review to be the most fitting technique for answering our research question. Such a review provides a broad search strategy that includes hand searching through key journals, reference lists from the literature, and information from relevant organizations or existing networks (Arksey & O'Malley, 2005). This technique is generally used to summarize research findings and identify research gaps (Arksey & O'Malley, 2005). Hereto we used an adaptation of the developmental framework of Kerig, Ludlow, and Wenar (2012). The framework of Kerig et al. (2012) is based on a holistic and dynamic approach that perceives a child’s development as being the result of interaction between a series of successive developmental processes. Simultaneously, the child interacts with his or her different contexts of development and deals with the attending risk and protective factors (Kerig et al., 2012). In line with this framework, we distinguished five contexts of development: (a) biological, (b) individual, (c) family, (d) care history, and (e) social-cultural.

The following inclusion criteria were used. Studies had to (a) focus primarily on child and family-related characteristics at admission that connect to the chosen developmental framework; (b) concern Western-oriented literature; (c) be written in English or Dutch; (d) have a publication date from 1990 onwards; (e) relate mainly to school-aged (i.e., 6-12 years)

children; and (f) focus on a research population that is comparable to the European population in terms of ethnicity. The review's exclusion criteria were (a) studies concerning adopted children or children with intellectual disabilities; (b) studies related to crisis placements, secure residential care, and inpatient psychiatric care; (c) and graduate-level theses or dissertations. No differences were made between articles about kinship foster care (i.e., care by relatives) and non-kinship foster care, due to the ambiguity of evidence in relation to the superior performance of either form of care (Wilson, Sinclair, Taylor, & Pithouse, 2004).

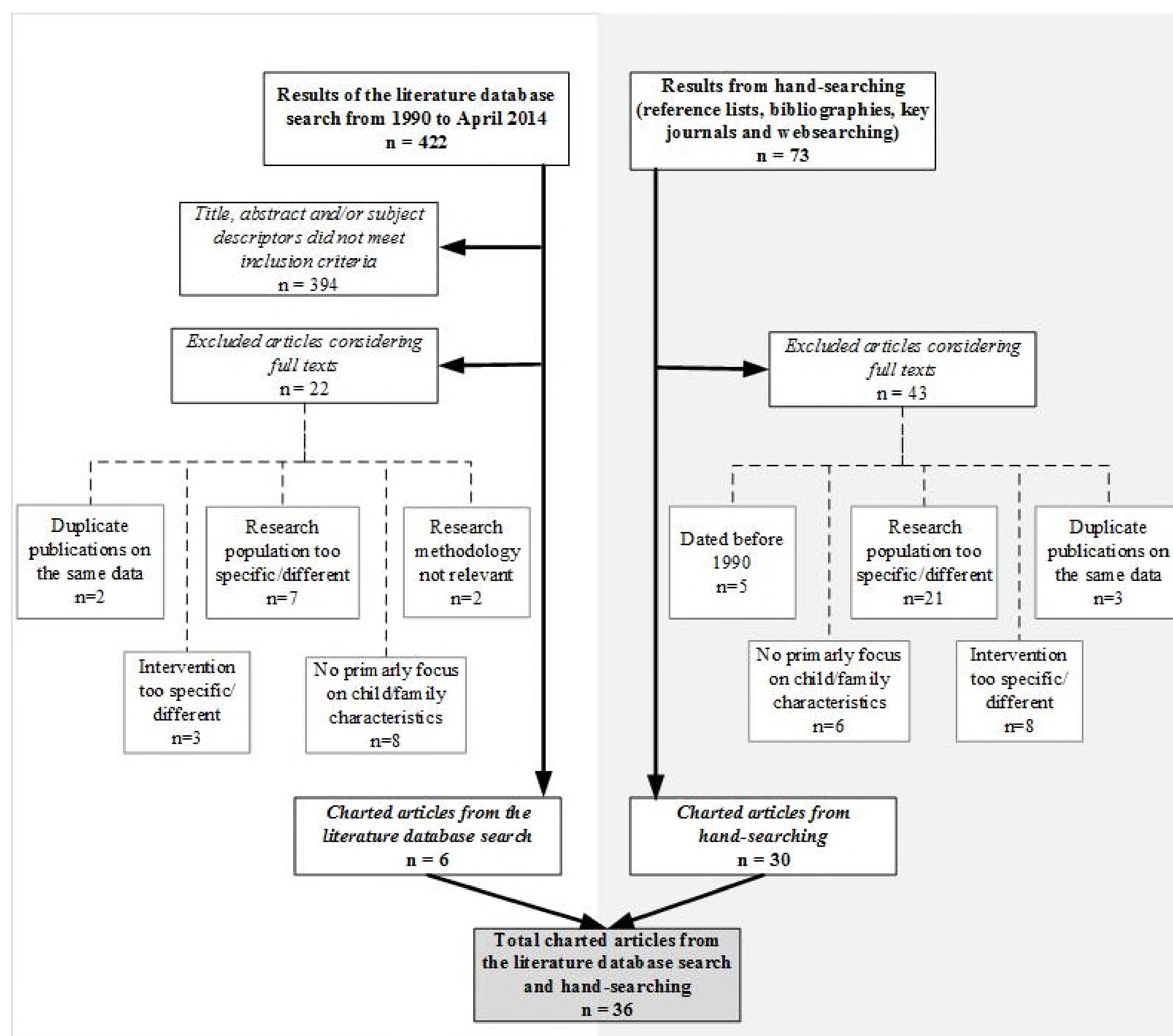

Figure 1. Flowchart showing the results of the search strategy

We undertook systematic searches with a combination of search terms in the following electronic databases: CINAHL, ERIC, PsychInfo, and MEDLINE. Due to the heterogeneity of the terminology in youth care studies, we used a broad scope of search terms to achieve sufficient coverage of the available literature. Such an approach is common when scoping reviews are conducted (Arksey & O'Malley, 2005). First, to define the relevant case characteristics, we used the terms typolog*, epidemolog*, prevalence, profile, baseline, characteristic, discriminat*, variable, cue, differ*, similar*, and compar*. Second, to define the research population we used child*, infant, boy, girl, juvenile, kid, youth, and toddler.

Finally, to define settings for out-of-home care we used residential, institutional, foster, out-of-home, group home, shelter care, group care, teaching family homes, family home, family-style group care, teaching family model, and family type home. Thereafter, the results were refined to focus specifically on studies that considered school-aged children (i.e., 6-12 years old) and used the following types of methodology: systematic review, meta-analysis, literature review, prospective study, follow-up study, and longitudinal study. Additional articles were obtained using the snowball method, in which we followed references of interest from relevant handbooks, key journals, and certain articles. Similarly, we hand-searched the sites of relevant organizations that work in the field of youth care, such as the Netherlands Youth Institute.

We determined whether all of the articles identified through the literature search met the inclusion criteria based on their title, abstract, and key words. If they did, their full texts were imported into the "Endnote" bibliographic software package. We then used Microsoft Excel to record several literature data characteristics as the basis for the final selection of articles. The final results of the search strategy, including the specific reasons for article exclusion, are displayed in a flowchart (Figure 1). Articles that were only used to build the introduction or define specific terms are hereby excluded. In total, 36 articles met all of the inclusion criteria when their full texts were considered. The accompanying Table 1 identifies the considered type(s) of care-modality, sample size, and country of origin considered for each included primary empirical study. Three noteworthy comments can be made with regard to the included articles. First, there was some overlap between the datasets used for analysis in the reports of Strijker, Zandberg, and Van der Meulen (2002, 2005); Hussey (2006); Hussey and Guo (2002); and Tarren-Sweeney (2008a, 2013). We nevertheless decided to include all of the articles, due to the different purposes of each study. Second, all of the foster care articles concerned long-term foster care; the sole exception was the article of Lee and Thompson (2008), which specifically related to treatment foster care. Finally, although we used the results of Minnis, Minnis, Everett, Pelosi, and Dunn (2006) for the description of several characteristics, we excluded their results from our summary table of case characteristics (Table 2). This was because the mostly Caucasian ethnic composition of their population is not comparable with the composition of the European population.

RESULTS

In this section, the differences and similarities of children at admission to foster care, family-style group care, and residential care that were identified during the literature review are discussed. Additionally, all reported defining characteristics are summarized in Table 2, where they are arranged by both the five contexts of development and the three care modalities.

Table 1
Summary Table of Study Characteristics of Included Primary Empirical Studies (*n* = 29)

Study (publication year)	Setting(s)[a]	N	Country of origin
Armsden et al. (2000)	FC	362	USA
Barber and Delfabbro (2009)	FC	235	Australia
Bernedo et al. (2014)	FC	104	Spain
Bhatti-Sinclair and Sutcliffe (2012)	OCN	274203	USA
Esposito et al. (2013)	OCN	2940	Canada
Franzén et al. (2008)	FC, RC	3485[b]	Sweden
Gardeniers and De Vries (2011)	FGC	162	the Netherlands
Holtan et al. (2013)	FC	135	Norway
Hussey (2006)	RC	306	USA
Hussey and Guo (2002)	RC	142	USA
James,Roesch et al. (2012)	FC, RC	1191	USA
Lee and Thompson (2008)	FC, FGC	828	USA
Minnis et al. (2006)	FC	175	UK
Newton et al. (2000)	FC	514	USA
Scholte (1997)	FC, RC	81	the Netherlands
Scholte and Van der Ploeg (2010)	RC	123	the Netherlands
Strijker and Knorth (2009)	FC	419	the Netherlands
Strijker et al. (2008)	FC	419	the Netherlands
Strijker et al. (2002)	FC	120	the Netherlands
Strijker et al. (2005)	FC	91	the Netherlands
Sullivan (2008)	FC	2996	USA
Tarren-Sweeney (2008a)	FC	347	Australia
Tarren-Sweeney (2013)	FC	347	Australia
Van der Steege (2012)	FGC	56	the Netherlands
Vanderfaeillie et al. (2013)	FC	49	Belgium
Vanschoonland et al. (2012)	FC	20	Belgium
Vanschoonland et al. (2013)	FC	212	Belgium
Yampolskaya et al. (2014)	OCN	33092	USA
Zima et al. (2000)	FC, RC	330	USA

[a] FC = foster care, FGC = family-style group care, RC = residential care, OCN = out-of-home care, not otherwise specified.
[b] Only information of the cohort ‘school-aged children (6-12)’ has been used.

Biological context

Within the biological context, *gender* was frequently mentioned as a defining characteristic. In most studies, girls were more represented in foster care than boys (Armsden, Pecora, Payne, & Szatkiewicz, 2000; James, Roesch, & Zhang, 2012; Lee & Thompson, 2008; Scholte, 1997; Strijker et al., 2008; Strijker et al., 2005; Van den Bergh & Weterings, 2010; Vanderfaeillie, Van Holen, Vanschoonlandt, Robberechts, & Stroobants, 2013;

Vanschoonlandt et al., 2013). Some researchers found a slightly higher percentage of boys, up to a maximum of 56% (Holtan, Rønning, Handegård, & Sourander, 2005; Minnis et al., 2006; Wilson et al., 2004). Conversely, in family-style group care boys were mostly represented (Gardeniers & De Vries, 2011; Lee & Thompson, 2008; Van der Steege, 2012). Here the reported percentages of boys varied from 54 to 62%. However, very little evidence was found that the gender differences between foster care and family-style group care are statistically significant. Only Lee and Thompson (2008) reported a significant difference in the number of boys in these two categories. Finally, the vast majority of the children in residential care were boys; the percentages varied from 59 to 72% (Hussey, 2006; Hussey & Guo, 2002; James, Roesch et al., 2012; Lee & Thompson, 2008; Scholte, 1997; Scholte & Van der Ploeg, 2010). Nevertheless, neither James, Roesch et al. (2012) nor Scholte (1997) found any statistically significant differences between foster and residential care concerning gender differences.

With respect to *age of admission*, children in foster care were on average between 7 and 11 years old (Barber & Delfabbro, 2009; Bernedo, Salas, Fuentes, & García-Martín, 2014; James, Roesch et al., 2012; Minnis et al., 2006; Strijker et al., 2008; Strijker et al., 2002). Only Tarren-Sweeney (2013) found an average age of 3.5 years at entry into care, although this presumably concerns the age at *first* placement. In family-style group care, the mean age of admission varied from 10 to 12 years old (Gardeniers & De Vries, 2011; Van der Steege, 2012). According to Lee and Thompson (2008), children in family-style group care were significantly older than children in foster care when placed out-of-home. However, they only included children aged 8 years and older in their research population, which might have increased the reported mean age of admission. Lastly, the average age of admission for residentially placed children appear to be the highest of the three settings. The reported mean ages varied from 10 to 14 years (Hussey, 2006; James, Roesch et al., 2012; Scholte, 1997; Scholte & Van der Ploeg, 2010). In comparison with foster children, residentially placed children were reported to be significantly older at admission (James, Roesch et al., 2012; Scholte, 1997). Curtis et al. (2001) made the same conclusion based on their literature review. Only two studies specifically reported age at the time of *first* placement into out-of-home care: Yampolskaya, Sharrock, Armstrong, Strozier, and Swanke (2014) found an average age of 6.4 years (SD = 5.4), while Hussey and Guo (2002) reported an average of 4.9 (specifically for residentially placed children). It should be noted that the ambiguity in reported figures is presumably due to differences in research methodology between the included studies.

A third defining characteristic of children in care was their *physical health.* Yampolskaya et al. (2014) demonstrated that six percent of the children had physical health problems. However, James, Roesch et al. (2012) reported substantially more chronic health problems for children in both foster and residential care: they found that approximately one-third of the children have these problems. Likewise, Tarren-Sweeney (2008a) indicated physical health problems in 30% of the foster children. The comparability of the findings related to physical health problems is limited by the heterogeneity of these problems' definition. Tarren-Sweeney (2008a) for example refered to specific physical health problems such as epilepsy and motor neurological conditions, whereas both James, Roesch et al. (2012) and Yampolskaya et al. (2014) used a broader definition like "the presence of any serious chronic

physical health conditions that adversely impact the child's daily functioning" (Yampolskaya et al., 2014, p. 196).

Lastly, some studies reported the *average IQ* of children in care. A meta-analysis of IQ delays in orphanages by Van IJzendoorn (2008) showed a mean IQ of 84.4 (SD = 16.8), which can be classified as "below average" intellectual functioning. Hussey and Guo (2002) also found a mean IQ of this order for residentially placed children (M = 82.5, SD = 17.4). On the other hand, a longitudinal survey of residentially placed children by Scholte and Van der Ploeg (2010) showed a mean IQ of 90.2, which reflects lower levels of "average intelligence." Unfortunately, no study was found reporting the mean IQ of foster children and children placed in family-style group care. De Swart et al. (2012) confirmed in their meta-analysis, that even to date remarkable few studies include IQ as moderator, whilst literature data have shown that this factor partly affects the child's cognitive abilities and learning style. However, a retrospective study by Tarren-Sweeney (2008a) concluded that nearly 23% of foster children had an intellectual disability. In general, available data indicate that a lower IQ is associated with higher levels of psychopathology (Hussey & Guo, 2002; Tarren-Sweeney, 2008a).

Individual context

According to Bhatti-Sinclair and Sutcliffe (2012), risk factors within the individual context are the main reason for out-of-home placement. In the literature, a frequently mentioned risk factor was the presence of *emotional problems.* A recent study of Yampolskaya et al. (2014) found that more than half (53%) of the children in care had such problems. With regard to foster care, the reported percentage of foster children with emotional problems varied from 14 to 45%, mostly as measured with the Child Behavior Checklist (CBCL) (Armsden et al., 2000; Bernedo et al., 2014; James, Roesch et al., 2012; Minnis et al., 2006; Scholte, 1997; Sullivan, 2008; Tarren-Sweeney, 2013; Vanderfaeillie et al., 2013). Within residential care, this prevalence rate varied from 39 to 57% (James, Roesch et al., 2012; Scholte, 1997; Scholte & Van der Ploeg, 2010). No information was found regarding emotional problems in children placed in family-style group care. When comparing the number of children with emotional problems in foster and residential care, James, Roesch et al. (2012) did not find any statistically significant differences. However, Scholte (1997) demonstrated that residentially placed children showed emotional problems significantly more often than foster children.

Considering *behavior problems,* the number of foster children with a score in the (borderline) clinical range on the externalizing problems scale of the CBCL covered a broad area, varying from 34 to 63% (Armsden et al., 2000; Bernedo et al., 2014; James, Roesch et al., 2012; Minnis et al., 2006; Tarren-Sweeney, 2013; Vanderfaeillie et al., 2013; Vanschoonlandt et al., 2013). At least one-third of foster children had these problems. In contrast, Scholte (1997) reported much lower scores on the different subscales belonging to the externalizing problems scale, varying from 10 to 15%. This difference is probably due to the dating of the research. Last decades, more children with severe psychosocial problems presumably have been admitted to foster care instead of being placed in more restricted types of care (in accordance with the UN guidelines [2009, December 18]). In family-style group homes, 40 to 60% of the children showed behavior problems, especially hyperactive and

impulsive or defiant and antisocial behavior (Van der Steege, 2012). Lee and Thompson (2008) found that children in family-style group homes had (with statistical significance) more behavior problems than those placed in treatment foster care. Finally, behavior problems were reported in more than half of the children at admission to residential care (James, Roesch et al., 2012; Scholte, 1997; Scholte & Van der Ploeg, 2010). The same studies also reported that residentially placed children showed (with statistical significance) more behavior problems in comparison with foster children. As claimed by Esposito et al. (2013), the degree of behavior problems increases the risk of an out-of-home placement, in particular for older children.

The behavior problems seem in part to be related to *attachment problems* (Newton et al., 2000; Vanschoonlandt et al., 2012). Therefore, the quality of attachment development of children in care is a third relevant factor within the individual context. A recent review of Pritchett, Gillberg, and Minnis (2013) concluded that the severeness of attachment problems was related to negative placement outcomes. Nevertheless, little detailed information was found concerning the prevalence of the attachment problems of children placed out-of-home. The definition of attachment problems also appeared to be very heterogeneous. Concerning foster care, Tarren-Sweeney (2013) found symptoms in 20% of the foster children that specifically related to complex attachment problems that were not reducible to other pyschiatric disorders. Strijker et al. (2008) reported a slightly lower percentage of 14%, but they only included foster children with an actual Diagnostic Manual of Mental Disorder classification for reactive attachment disorder. In family-style group care, attachment problems were reported in 50% of the children (Van der Steege, 2012). Finally, Scholte and Van der Ploeg (2010) found signs of social and emotional detachment in 31% of the residentially placed children. In this study, the Social Emotional Detachment Questionnaire (in Dutch called VFO) was used (Scholte & Van der Ploeg, 2007). They have similarly inventoried the rate of children with insecure attachment patterns based on the children's case files and found a percentage of 52% (Scholte & Van der Ploeg, 2010). Generally speaking, on average one-third of the children in care have attachment problems. This was also confirmed in a meta-analysis by Van IJzendoorn, Schuengel, and Bakermans-Kranenburg (1999), who demonstrated that 38% of the children (aged 0-4 years) in "normal" middle class, nonclinical groups in North America showed insecure attachment patterns.

A fourth relevant factor was the *cognitive development* and related *school performance*. As noted previously, both aspects are affected by the child's intelligence (De Swart et al., 2012). Problems in cognitive development and poor school performance seem to be the least common in foster care; at most one-third of the foster children had poor academic performance (Bernedo et al., 2014; James, Roesch et al., 2012; Minnis et al., 2006; Scholte, 1997; Tarren-Sweeney, 2008a). Likewise, according to Van der Steege (2012) found that approximately one-third of the children in family-style group care demonstrated cognitive problems such as social skills problems and attention problems. With regard to residential care, the reported percentages of children with cognitive problems showed more variability. One-fifth to one-half of the children appeared to have school-related problems, such as poor school motivation or delays in language, cognition, or adaptive behavior (James, Roesch et al., 2012; Scholte, 1997; Scholte & Van der Ploeg, 2010). Zima et al. (2000) found a relationship between caregiver scores in the clinical range on the CBCL and a history of

suspension or expulsion. In total, they reported that 14% of the children in care experienced at least one suspension or expulsion (Zima et al., 2000). These researchers also reported that 23% of the children in care had reading and math skill delays and that 13% repeated at least one grade (Zima et al., 2000). Unfortunately, no distinction was made between foster and residentially placed children. James, Roesch et al. (2012) did not find any significant differences in cognitive development and school performance when comparing residentially placed and foster children. In contrast, Scholte (1997) found significantly more school-related problems in residentially placed children than in foster children. Because different aspects of cognitive development and school performance were measured in the two studies, their results are not directly comparable. In general, both Pritchett et al. (2013) and De Swart et al. (2012) state that little is known about the school performance, cognitive skills, and IQs of out-of-home placed children in relation to placement outcomes. Furthermore, Pritchett et al. (2013) conclude that the existing literature shows conflicting results concerning whether risk factors in this area enhance the chance of negative placement outcomes.

Finally, a study of Tarren-Sweeney (2008a) indicated that 36% of foster children were prescribed any type of *medication*; most common ones being mood-altering (“psychotropic”) and asthma medications. For children in residential care, Hussey and Guo (2002) reported a very high percentage (92%) of children using psychotropic medication. No studies related to the use of medication in family-style group care were found.

Family context

Numbers concerning *parental divorce* were searched first. The percentage of divorced parents (43%) in family-style group care reported by Van der Steege (2012) approximated the overall divorce rate in the Netherlands, which is 37% (Centraal Bureau voor de Statistiek, 2013). Moreover, 14% of the children with divorced parents lived in a stepfamily (Van der Steege, 2012). The percentage of divorced parents in both foster and residential care is many times higher. In foster care, Scholte (1997) reported a percentage of 84%. Similarly, in residential care the percentage of divorced parents was indicated as being between 72 and 80% (Scholte, 1997; Scholte & Van der Ploeg, 2010). It should be noted that all of the reported percentages are based on Dutch research populations. Also related to the family composition is the percentage *deceased parents*. Numbers were only found for family-style group care. Van der Steege (2012) reported that 9% of the mothers and 18% of the fathers of placed children were deceased.

Next to family composition, the degree of family problems was a relevant defining characteristic in children placed out-of-home. Complex and multiple family problems are a main reason for out-of-home placement of young children (aged 0-9 years) in particular (Esposito et al., 2013; Yampolskaya et al., 2014). A commonly mentioned risk factor in this area was child abuse. Concerning *physical or emotional child abuse*, approximately 5 to 45% of foster children have a history of this type of abuse (Bernedo et al., 2014; James, Roesch et al., 2012; Lee & Thompson, 2008; Scholte, 1997; Strijker et al., 2008; Tarren-Sweeney, 2008a). Only Minnis et al. (2006) reported a much higher percentage of emotional child abuse in their Scottish sample, namely 77%. On the other hand, the reported percentage of 5% by Vanschoonlandt et al. (2013) was actually very low in comparison to other studies concerning foster care. When distinguishing between physical and emotional child abuse

among foster children, physical abuse seems to be less common: up to one-third of them have a history of this type of abuse. Regarding family-style group care, Van der Steege (2012) reported a similar percentage of 28% of children being physically or emotionally abused. In contrast, Lee and Thompson (2008) stated that 52% of the children in family-style group care experienced physical or emotional abuse. Lastly, the percentage of residentially placed children with a history of this type of abuse varied from 15 to 63% (Hussey, 2006; Hussey & Guo, 2002; James, Roesch et al., 2012; Lee & Thompson, 2008; Scholte & Van der Ploeg, 2010). It is noteworthy that the Hussey and Guo's (2002) reported percentage of 63% was almost twice as high as other reported percentages for residentially placed children. This is possibly due to the specific research population in that study.

Another common type of child abuse was *physical or emotional neglect.* In short, the literature suggests that at least one-quarter to one-third of out-of-home placed children experience neglect, although the presented percentages differ considerably. For foster children, in general one-half to two-thirds of the children have been neglected within their family of origin (Bernedo et al., 2014; James, Roesch et al., 2012; Lee & Thompson, 2008; Strijker & Knorth, 2009; Tarren-Sweeney, 2008a; Yampolskaya et al., 2014). Only Vanschoonlandt et al. (2013) found a much lower percentage of neglected foster children, namely 21%. Lee and Thompson (2008) found that foster children had a history of neglect significantly more often than children placed in family-style group care. When it comes to this latter type of care, about 40% of the children have experienced physical neglect, emotional neglect, or both within their family of origin (Lee & Thompson, 2008; Van der Steege, 2012). In residential care, findings demonstrated percentages of neglected children that varied from 26 to 69% (Hussey & Guo, 2002; James, Roesch et al., 2012; Lee & Thompson, 2008; Scholte & Van der Ploeg, 2010). Barber and Delfabbro (2009) stated that in general tems, child neglect mainly occurs in young children. Both Barber and Delfabbro (2009) and Spinhoven et al. (2010) also found that neglected children have an increased risk of other forms of child abuse. In addition, (emotionally) neglected children are most vulnerable for lifetime mood disorders like anxiety or depression in the future (Spinhoven et al., 2010). It therefore seems very important to be alert for signs of child neglect in the event of family problems.

A third form of child abuse was *child sexual abuse.* In foster care, most studies concluded that about 10% of foster children have been sexually abused in the past (Bernedo et al., 2014; James, Roesch et al., 2012; Scholte, 1997; Strijker et al., 2008; Tarren-Sweeney, 2008a). At the same time, Minnis et al. (2006) and Lee and Thompson (2008) respectively found percentages of 28% and 29% in relation to foster children. As far as children in family-style group care are concerned, very little information was found: only a study of Lee and Thompson (2008) reported a percentage of 17%. This study additionally showed that foster children had a history of sexual abuse significantly more often than children placed in family-style group care. For residentially placed children, the percentage of those who have experienced child sexual abuse in the past appears to be around 10% (James, Roesch et al., 2012; Scholte, 1997; Scholte & Van der Ploeg, 2010). Remarkably, Hussey (2006) reported that almost half of residentially placed children have been sexually abused, whereby girls were almost one and a half times more at risk (61%) than boys.

Next to child abuse, *domestic violence* was also a relevant risk factor. In foster and family-style group care, domestic violence occurs within about one-third of the families of origin (Lee & Thompson, 2008; Strijker et al., 2008; Tarren-Sweeney, 2008a; Yampolskaya et al., 2014). Lee and Thompson (2008) even reported percentages of 41% for foster children and 31% for children in family-style group care, with statitically significant differences between both percentages. As far as residentially placed children are concerned, only Hussey and colleagues reported domestic violence figures. They concluded that such violence occurs within about one-sixth of the families of origin (Hussey, 2006; Hussey & Guo, 2002).

Furthermore, the presence of *parental mental illness* could be identified as an important risk factor within the family context. In relation to all three types of care, at least one in three parents show mental illness (Hussey & Guo, 2002; Lee & Thompson, 2008; Scholte, 1997; Scholte & Van der Ploeg, 2010; Strijker et al., 2008; Van der Steege, 2012). However, Scholte and Van der Ploeg (2010) reported that a much higher percentage (61%) of the parents (of residentially placed children) showed mental illness, whereby mothers clearly more often had these problems (49%) than fathers (12%). Likewise, findings of Minnis et al. (2006) demonstrated that 52% of the biological mothers (of foster children) showed mental illness. Lee and Thompson (2008) reported that the percentage of children in foster care with mentally ill biological parents (45%) was significantly higher than for children in family-style group care (20%). In comparing the percentages of mental illness between parents of children in foster and residential care, Scholte (1997) found no significant differences. It should be noted that because of the differences in severeness and kinds of parental mental illness, comparison between the three types of care is limited. In the same vein, this heterogeneity presumably have caused the broad range in percentages of parental mental illness.

Lastly some literature data considered parental substance abuse and parental incarceration. With reference to *parental substance abuse,* in all three types of care at least one in five parents have alcohol or drug problems (Hussey, 2006; Hussey & Guo, 2002; Lee & Thompson, 2008; Strijker et al., 2008; Yampolskaya et al., 2014). Hussey and Guo (2002) even reported drug abuse in 49% of the parents of children in residential care. Regarding *parental incarceration*, Hussey and Guo (2002) demonstrated that slightly more than 10% of the residentially placed children had an incarcerated parent. Lee and Thompson (2008) found a similar percentage (16%) of incarcerated parents for children in family-style group care and a (statistically significant) higher percentage for foster children (26%).

Care history context

To start with, the *mean number of previous placements* was an important defining characteristic. For the Netherlands, we found no literature related to the mean number of placements or repeated referrals to the three care modalities concerned. A large study of Yampolskaya et al. (2014), however, suggested that almost a quarter of the children in care have already experienced a previous placement, of which 29% have been admitted at least four times since their first referral to youth care. For foster children, some studies reported a mean of 3.1 to 3.4 previous placements (Lee & Thompson, 2008; Tarren-Sweeney, 2013). Other studies related to foster care reported a lower mean of previous placements that lied between 1.3 and 1.8 (James, Roesch et al., 2012; Strijker et al., 2008). Concerning children in family-style group care, Lee and Thompson (2008) concluded that these children have

experienced significantly fewer previous placements than foster children, specifically 2.0 placements. Finally, previous placements in residential care appear to be the highest, with an average of at least four (Hussey, 2006; Hussey & Guo, 2002; James, Roesch et al., 2012). James, Roesch et al. (2012) stated that residentially placed children experienced significantly more placements than foster children.

With regard to *admission from birth home,* almost half of the foster children were placed directly from their birth home into foster care during their first out-of-home placement (Barber & Delfabbro, 2009; Holtan et al., 2005; Strijker et al., 2008). The former residences of the other half of the foster children in these studies were not clearly reported. Concerning children placed in family-style group care, findings of Gardeniers and De Vries (2011) demonstrated that 23% of these children entered from their birth home and that approximately the same percentage (22%) entered from foster care. Most children (48%) were placed into family-style group care from residential care (Gardeniers & De Vries, 2011). Lastly, about half of the children entered residential care from their birth home (Scholte, 1997; Scholte & Van der Ploeg, 2010), although it could not be determined from the study whether or not this represented a first out-of-home placement. Next to admission from birth home, Scholte (1997) reported that 20% of the residentially placed children came from a foster family setting while 28% came from another residential institution.

A final defining characteristic was the percentage of children in *child protective service custody.* When a child is at risk for abuse or neglect or has suffered serious physical or emotional damage, the child can be removed from the custody of his or her parents or guardians by a governmental agency (Arizona Office of the Auditor General, 2008). In foster care, the number of children in child protective service custody appears to be the lowest; the reported percentages varied from 57 to 59% (Strijker et al., 2002; Van den Bergh & Weterings, 2010; Vanschoonlandt et al., 2013). A distinction can be made between family supervision and a suspension of parental rights over the child. In the case of suspension, the child is placed under the permanent legal guardianship of the government, and the caseworker has rights and responsibility for the care, custody, and control of the child (DPHHS Human Resources Division, 2010). When distinguishing between the two types of custody, Strijker et al. (2002) reported that 19% of foster children were under family supervision while 13% were under permanent legal guardianship. In family-home care, at least two-thirds of the children were in child protective service custody, mostly under family supervision (Gardeniers & De Vries, 2011; Lee & Thompson, 2008; Van der Steege, 2012). Finally, approximately 75% of the children in residential care were in child protective service custody (Hussey, 2006; Lee & Thompson, 2008; Scholte & Van der Ploeg, 2010). Similarly, a review of Frensch and Cameron (2002) also concluded that residentially placed children were mostly under child protective service custody.

Social-cultural context

A first important factor in the social-cultural context was *peer relations.* Results of Scholte (1997) showed that 8% of foster children experienced problems in this area. He also concluded that such problems were less likely to occur in foster care than in residential care, where a percentage of 46% was found (Scholte, 1997). Minnis et al. (2006) reported in contrast a much higher percentage of 63% foster children with peer problems in their Scottish

sample, based on the Strengths and Difficulties Questionnaire. As far as children in family-style group care are concerned, Van der Steege (2012) reported that 29% of the children had peer problems.

Ethnic background was also a factor that was mentioned often. In general, about half of the children in care have a Caucasian ethnic background (Armsden et al., 2000; Yampolskaya et al., 2014). Nevertheless, the figures concerning ethnic background are hardly comparable due to both the heterogeneity of the defined ethnic groups and the diversity within those groups (Bhopal & Donaldson, 1998). For example, “White” or “Caucasian” is often used in American literature; the relevant directive from the U.S. Office of Management and Budget includes people from Europe, North Africa, and the Middle East in the definition of this term (Bhopal & Donaldson, 1998). In contrast, the governmental body of Statistics Netherlands considers people from both North Africa and the Middle East to be “non-Western” category (Centraal Bureau voor de Statistiek, 2000). This non-Western category also includes people from Africa, Latin America, and Asia. Therefore, the percentages related to ethnic background in our scoping review should be considered as indicative. Several studies reported that more than half of the American children in foster care had a Caucasian ethnic background (James, Roesch et al., 2012; Lee & Thompson, 2008). In contrast, Minnis et al. (2006) reported that 99% of foster children had a Caucasian ethnic background, but this percentage relates to a Scottish sample and thus is not directly comparable with American foster children. With respect to residentially placed American children, almost half had a Caucasian ethnic background (Hussey, 2006; James, Roesch et al., 2012). In the Netherlands, Scholte and Van der Ploeg (2010) reported a slightly higher percentage of 77% for residentially placed children. Lastly, a Caucasian ethnic background mostly occurred in family-style group care both in the United States and the Netherlands (Gardeniers & De Vries, 2011; Lee & Thompson, 2008; Van der Steege, 2012). On the other hand, Lee and Thompson (2008) found no statistically significant differences in ethnicity between foster children and children in family-style group care.

A final factor within this context was *social-economic status*. James, Roesch et al. (2012) reported that over 80% of the children in foster care lived in poverty, based on the number of children with insurance through Medicaid (which is an American social health care program for families and individuals with low income and limited resources). Likewise, more than 80% of the children in residential care had a low social-economic status (Hussey, 2006; James, Roesch et al., 2012). In a Swedish sample, Franzén, Vinnerljung, and Hjern (2008) reported lower percentages for out-of-home placed children who are of primary school age. Over 12% of the mothers were at or below the poverty line. We found no results relating to the social-economic status of children in family-style group care. Overall, both Esposito et al. (2013) and Franzén et al. (2008) concluded that adverse social-economic factors put young children at risk for out-of-home placement.

Table 2
Summary Table of Defining Characteristics, Arranged by Context and Setting

	Foster care	Family-style group care	Residential care
Biological context			
Male gender/child (%)	38-56	54-62	59-72
Mean age of admission/child (years)	7.5-11.0	10.0-12.0	9.9-13.8
Chronic health problems/child (%)	27-30	7	38
Mean IQ/child [a]	unkn.	unkn.	82.5-90.2
Individual context			
Emotional problems/child (%)	14-45	unkn.	39-57
Behavioral problems/child (%)	34-63	40-60	53-62
Attachment problems/child (%)	14-20	50	31-52
School/cognitive problems/child (%)	15-36	30-36	20-55
Use of medication/child (%)	36	unkn.	92
Family context			
Divorced/biological parents (%)	84	43	72-80
Deceased/parent (%)	unkn.	27	unkn.
(Physical/emotional) child abuse (%)	5-45	28-52	15-63
(Physical/emotional) child neglect (%)	21-78	39-41	29-69
Child sexual abuse (%)	6-29	17	11-46
Domestic violence (%)	32-41	31	16-18
Parental mental illness (%)	30-61	20-38	41-61
Parental substance abuse (%)	19-34	21	26-49
Parental incarceration (%)	26	16	12
Care history context			
Number of previous placements (mean)	1.3-3.4	2.0	4.3-6.6
Admission from birth home (%)	45-56	23	48-52
Child protective service custody (%)	57-59	65-82	66-73
Social-cultural context			
Peer problems (%)	8	29	46
Caucasian ethnic background (%)	51-58	60-93	49-77
Low income/poverty (%)	81	unkn.	83-95

Note. When percentages or means varied, the range is given.
Unkn.= unknown.
[a] Total IQ-score.

DISCUSSION

In general, family-based settings such as foster or family-home care are considered to be the preferred type of care when out-of-home placement is required (Courtney, 1998; Doran & Berliner, 2001; United Nations, 1989). At the same time, the reviewed literature showed that at least one-third of the children placed in family-based settings experience serious placement disruptions (e.g., Scholte, 1997; Van den Bergh & Weterings, 2010). Several researchers therefore suggest that residential care could sometimes be in the best interests of the child (e.g., Butler & McPherson, 2007; De Swart et al., 2012). This suggestion results in the challenge of determining when residential care must be preferred (Frensch & Cameron, 2002). However, to date both evidence-based guidelines and assessment tools to make informed decisions for a specific type of out-of-home care are lacking (Barth, 2002; Frensch & Cameron, 2002; Huefner et al., 2010). To develop such a scientifically supported instrument, insight is needed into the populations referred to the three main care modalities (Barth, 2002; Frensch & Cameron, 2002). The primary objective of this review was hence to determine similarities and differences in characteristics at admission of school-aged children who were placed in foster care, family-style group care, and residential care.

Notwithstanding the large variation in reported figures, available data indicated the following similarities and differences in case characteristics. In relation to *similarities*, the literature data showed that the majority of normally intelligent children in all three care modalities suffer from severe problems in the individual, family, or social context. Second, several research gaps were found concerning case characteristics at admission to all three types of care. As regards to the individual context, for example, remarkably little is known about intelligence and related cognitive development. The prevalence of attachment problems also remains largely unknown. However, both risk factors appear to relate to placement outcomes (e.g., Pritchett et al., 2013; Tarren-Sweeney, 2008a). In the family context, figures on domestic violence and sexual abuse were ambiguous or missing in particular. A final research gap in all three care modalities concerns care history (such as age at admission and length of stay in care), which was also identified by De Swart et al. (2012). Nevertheless, care history is strongly associated with negative placement outcomes (e.g., Jones et al., 2011; Oosterman et al., 2007).

Meanwhile, available data also revealed various *differences* among children in the three care modalities. Concerning the severity of child and family difficulties at admission, all appear to be most severe in residential care, with the exception of specific parental problems (such as parental mental illness, addiction, and incarceration). In addition, residentially placed children experience the highest number of previous placements, which seems to reflect the tendency to view residential care as the treatment of “last resort” (Barth, 2002; Huefner et al., 2010; Nijhof, Otten, & Vermaes, 2014). Our presumption that attachment problems mostly occur in residential care cannot be confirmed, due to an insufficiency of prevalence data regarding the quality of attachment development. In contrast to residential care, problematic family circumstances (and not the individual problems of children) appear to be the main reason for placement in foster care. The high percentages of parents with individual problems such as addiction and mental illness suggest in particular that these problems temporarily preclude parents from offering their children a healthy upbringing.

Finally, findings indeed seem to indicate that family-style group care can be considered an intermediate type of care between foster care and residential care, as noted previously (Barth, 2002; Huefner et al., 2010; Rouvoet, 2009). Most of the reported percentages concerning child and family difficulties at admission of children in family-style group care were between the percentages reported for foster and residentially placed children. In addition, children mostly appeared to enter family-style group care from either foster or residential care.

In summarizing the findings, an initial tentative profile has emerged. Normally intelligent *foster children* could be characterized as young school-aged children whose most notable individual problems include chronic health problems as well as behavioral problems. They usually come from broken, poor families that frequently have histories of neglect and domestic violence. Many parents appear to suffer from mental illness, addiction problems, or both, and one of them would commonly be incarcerated. For *children in family-style group care* with average intelligence, the most common finding was that data concerning their individual problems were insufficient. However, the few studies available suggest that attachment and behavioral problems occur particularly frequently and that the children would mostly have a Caucasian ethnic background. With regard to family issues, many children appear to suffer from physical or emotional abuse and are mainly under civil law family supervision. Children placed in family-style group care usually come from another type of care. Finally, *residentially placed children* may be characterized as older school-aged male children with lower than average IQs. Many of them seem to suffer from chronic health problems and the reported figures indicate that many of them are on prescribed medication. Difficulties in peer relations and cognitive problems appear to be the most notable characteristics of residentially placed children, who also seem to frequently display severe emotional and behavioral problems. The extent to which these social-emotional problems relate to attachment problems remains unknown. Furthermore, residentially placed children tend to come from broken, poor families that chiefly have histories of child abuse, neglect, and sexual abuse. Many parents in these families seem to suffer from mental illness and addiction. Literature data suggest that these children are usually under permanent legal guardianship and have experienced an average of at least four placements before they enter residential care.

The results of this review support arguments for the development of an evidence-based assessment tool to make well-informed referral decisions when 24-hour out-of-home placement is needed. However, future (longitudinal) research is required to relate intake characteristics to both short- and long-term placement outcomes (Curtis et al., 2001). Other determining factors for out-of-home care should also be considered when developing such an assessment tool, including living group climate (Strijbosch et al., 2015) and the professionalism of youth care workers (De Swart et al., 2012). The hope is that this all will eventually result in optimizing the effectiveness of provided care, given each child's unique situation.

LIMITATIONS

Some limitations should be noted regarding this scoping review. The first relates to the broad search approach that was used (and is characteristic of a scoping review). In this approach, a study's substantive relevance is considered to be more important than the methodology used within it (Arksey & O'Malley, 2005). However, we still considered this technique to be the most appropriate for answering our research question. The second limitation concerns the considerable variance in the figures reported on the individual and contextual characteristics of children in care, due to the heterogeneity in research methodology, populations, or intervention characteristics of the reviewed studies. For example, the "residential treatment" category in research data includes many definitions, ranging from small-scale community-based settings for 8-10 children to major institutes that are isolated from community life (Curtis et al., 2001; Frensch & Cameron, 2002; Huefner et al., 2010). The same is applicable for the terms and definitions used in literature data for foster care (Curtis et al., 2001; Franzén et al., 2008) and family-style group care (Frensch & Cameron, 2002; Harder et al., 2013). Third, to deal with the heterogeneity of the terminology utilized in the literature for the three main types of out-of-home care, our search strategy utilized numerous common keywords for every type of care. However, we may have missed particular keywords. Fourth, placement decisions are often dependent on policy of local child care systems or child welfare caseworkers placement preferences (Barth, 2002; Bhatti-Sinclair & Sutcliffe, 2012; Curtis et al., 2001; Frensch & Cameron, 2002; Huefner et al., 2010; James, Landsverk, & Slymen, 2004), resource availability (Broeders, Van der Helm, & Stams, 2015; Frensch & Cameron, 2002; Huefner et al., 2010), and the child's ethnicity (Becker, Jordan, & Larsen, 2007; Fernandez, 1999). This phenomenon has presumably caused large variance in population characteristics and thus limited the generalizability of research findings. Moreover, it also confirms the need for an evidence-based assessment tool for making well-informed referral decisions. Lastly, no uniform definition is available for some constructs (such as ethnic background and attachment), which complicates comparisons between relevant percentages. Such situations were explicitly indicated in the result section.

3 CHILDREN REFERRED TO FOSTER CARE, FAMILY-STYLE GROUP CARE, AND RESIDENTIAL CARE: (HOW) DO THEY DIFFER?

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Children and Youth Services Review (2017), *77*, 1-9

ABSTRACT

To date, no evidence-based criteria are available to place children with multiple psychosocial risks and needs in the most appropriate type of (non-secure) out-of-home care. Due to this, other factors than just the clinical needs of the child and its family are in use, which can heighten the risk of both breakdown (i.e., unplanned terminated placement) and/or poor prognostic placement outcomes. To reduce adverse placement outcomes, insight into the risks and needs of the children at the time of referral can be helpful. To this end, this study explores similarities and differences in child, family and care history context of 200 Dutch school-aged children at the time of admission to foster, family-style group, and residential care. A cross-sectional design was used and data were collected through standardized questionnaires that were completed by the caregivers, substitute caregivers, and behavioral scientists. Case file information was also used. The results showed differences between the three subgroups in all three contexts, which suggest several setting-specific guidelines to promote positive outcome. Biological parents of foster children specifically are in need of support for their individual problems. In family-style group care, specifically, help is required for attachment and trauma-related problems. Residentially placed children are in particular need of specialized care for mental illness, behavioral and school/learning problems. Further research is needed to link the outlined specific characteristics at admission to the developmental pathways of out-of-home placed children. Such research may contribute to the development or refinement of a risk-need-responsivity model to support the decision making regarding out-of-home placement of children with serious psychosocial needs.

INTRODUCTION

A child's safety and healthy development may sometimes be threatened by adverse child or family circumstances (or both). When in-home (support) services cannot effectively resolve such risky circumstances, experts consider placing the child in (24-hour) out-of-home care a useful alternative strategy (Bhatti-Sinclair & Sutcliffe, 2012; Pinto & Maia, 2013; Vanschoonlandt, Vanderfaeillie, Van Holen, De Maeyer, & Robberechts, 2013). This (24-hour) out-of-home care typically consist of a continuum of intensive and restrictive care services, which vary from least restrictive types of care (e.g., kinship or non-kinship foster care) to family-style group care to residential care (Huefner, James, Ringle, Thompson, & Daly, 2010).

In (family) foster care, a child is considered in need of a (temporary) out-of-home placement due to concerns for its safety. The child is preferably placed with relatives (kinship foster care) or non-relatives familiar with the child; otherwise the child is assigned to a licensed foster home. There are two main types of foster care in the Netherlands (i.e., short and long-term foster care). In case of short-term foster care, the child stays temporarily with a foster family, while the biological parents are supported to improve their family circumstances in preparation for reunification (De Baat & Bartelink, 2012; Strijker, Knorth, & Knot-Dickscheit, 2008). The purpose of long-term foster care is providing a stable alternate rearing situation in a family setting until the child reaches the age of 18 years of age (Strijker et al., 2008). In contrast to the foster care process in the United States, adopting a foster child (rather than placement in long-term foster care) is very unusual in the Netherlands and other European countries (Holtan, Handegård, Thørnblad, & Vis, 2013). Second, a less familiar type of (24-hour) out-of-home care is family-style group care. Many synonyms are in use for this type of care (e.g., teaching family homes, family type homes, SOS children's villages, socio-pedagogical homes) (Farmer, Wagner, Burns, & Richards, 2003; Frensch & Cameron, 2002; Harder, Zeller, Lopez, Köngeter, & Knorth, 2013; Whittaker et al., 2015). Family-style group care is defined as follows; children living in home-like settings with group home parents (often a married couple with socio-pedagogical experience and training) who live at the setting (Lee & Thompson, 2008; Whittaker et al., 2015). Finally, residential care is an umbrella term that refers to several types of residential care that vary from non-secure residential to secure residential to inpatient psychiatric care (Barth, 2002; Whittaker et al., 2015). Residential facilities vary in their size, target group (e.g., delinquents, disabled children, children with mental health disorders), and in the therapeutic components available (Barth, 2002; Cheung, Goodman, Leckie, & Jenkins, 2011; Chor, McClelland, Weiner, Jordan, & Lyons, 2012; Curtis, Alexander, & Lunghofer, 2001; Hussey & Guo, 2002; James, Zhang, & Landsverk, 2012; Whittaker et al., 2015; Wilson, Sinclair, Taylor, & Pithouse, 2004). In this study, we focus on non-secure residential care only, because this specific type of care is closest to foster and family-style group care across the continuum of out-of-home care.

In accordance with the United Nations Guidelines for the Alternative Care of Children (henceforth "UN guidelines"), family-based settings (i.e., foster and family-style group care) are preferable when out-of-home placement is deemed necessary (United Nations, 2009, December 18). However, this guideline to date lacks scientific support (Bartelink, 2013;

Grietens, 2012; Hussey & Guo, 2002). Additionally, there are no clear placement criteria for the various types of out-of-home care (Chor et al., 2012; Lee, 2010; Strijker, Zandberg, & Van der Meulen, 2002). Also, or maybe therefore, allocation is often affected by other than clinical factors such as local referral policy or placement preferences of the case manager (Barth, 2002; Bhatti-Sinclair & Sutcliffe, 2012; Curtis et al., 2001; Frensch & Cameron, 2002; Huefner et al., 2010; James, Landsverk, & Slymen, 2004) and resource availability (Broeders, Van der Helm, & Stams, 2015; Frensch & Cameron, 2002; Huefner et al., 2010). Finally, placement instability is a common phenomenon across all three settings. Data on out-of-home placed children who have experienced an unplanned terminated placement (also called a “breakdown”) vary roughly from 20% up to even 80%, depending on the types of care included and the way placement instability was defined (e.g., Barber & Delfabbro, 2002; Delfabbro, Barber, & Cooper, 2002; Farmer et al., 2003; Jakobsen, 2013; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007; Scholte, 1997; Van den Bergh & Weterings, 2010; Van Manen, 2011; Ward, 2009). A breakdown might reflect a mismatch between the risks (e.g., danger to self, delinquency) and needs (e.g., mental health, psychosocial, clinical) on one hand and the assigned type of care on the other. Specifically, literature suggest that an inaccurate matching of treatment intensity and restrictiveness with the attending level of risks and needs results in less effective or even adverse treatment outcomes (e.g., Chor et al., 2012; Kamis-Gould & Minsky, 1995; Vanderfaeillie, Damen, Pijnenburg, van den Bergh, & Van Holen, 2016; Whittaker et al., 2015). Therefore, nowadays more and more emphasis is put on the development of risk-need-responsivity models to support the decision-making process for children with serious multiple risks and needs and, in the end, transform and improve the service system (Anderson, Lyons, Giles, Price, & Estle, 2003; Chor et al., 2012; Fallon et al., 2006; Lyons, Libman-Mintzer, Kisiel, & Shallcross, 1998). Previous attempts to construct a placement decision support algorithm, are the development of the Child and Adolescent Severity of Psychiatric Illness (CAPSI) (Lyons et al., 1998), the Child and Adolescents Needs and Strengths (CANS) Algorithm (Lyons, 2009), and the Children and Adolescent Service Intensity Instrument (CASII) (Fallon et al., 2006). For secure residential care specifically, the risk-need-responsivity model of Andrews, Bonta, and Wormith (2011) is commonly used for guiding offender assessment and treatment. Research on decision-making tools showed that important elements of such a tool are using child-level clinical information, emphasizing on the child’s level of development in the context of the family and parents, and involving various types of care which vary in level of restrictiveness. However, according to Chor et al. (2012) there is still much to learn about out-of-home placement decision making.

Needs assessment is considered to be a first step a more transparent and informed decision-making strategy (Anderson et al., 2003; Leloux-Opmeer, Kuiper, Swaab, & Scholte, 2016; Scholte, 1997; Strijker et al., 2002). More insight into the risks and treatment needs also results in more knowledge on additional treatment needs along with the placement (Armsden, Pecora, Payne, & Szatkiewicz, 2000). Furthermore, identified risks and needs at the time of admission can later be linked to a child's positive or negative developmental outcomes. These linkages might provide insight into factors that enhance successful cognitive and social-emotional growth in out-of-home care (Curtis et al., 2001; Whittaker et al., 2015). Besides individual needs assessment at admission, there is a need for comparative research on the distinguishing risks and needs of children in different settings of out-of-home care (Barth

et al., 2007; Farmer, Mustillo, Burns, & Holden, 2008). Notwithstanding the fact that such comparative research is available, it usually concerns a pairwise comparison between two types of care, mostly foster versus residential care. Examples of such comparisons are the studies of Allen and Vacca (2011), Barth (2002), Curtis et al. (2001), De Swart et al. (2012), DeSena (2005), James, Roesch, and Zhang (2012), Scholte (1997), and Smyke et al. (2012). Next to this, some studies compare children in family-style group care with foster or residentially placed children (Berrick, Courtney, & Barth, 1993; Lee & Thompson, 2008). However, little comparative studies are found concerning a triple comparison of characteristics of children in the three main types of care (i.e., foster care, family-style group care, and residential care). Only one scoping review (Leloux-Opmeer, Kuiper, Swaab et al., 2016) and one comparative study (Lausten, 2015) were found. Therefore, the aim of this study is to explore similarities and differences in risks and needs of Dutch school-aged children at the time of admission to foster, family-style group, and residential care.

The framework being used is an adaption of the developmental model of Kerig, Ludlow, and Wenar (2012) and distinguishes five contexts of development: (a) biological, (b) individual, (c) family, (d) care history, and (e) social-cultural (Leloux-Opmeer, Kuiper, Swaab et al., 2016). For the purpose of conciseness, results on the biological context will be added to the individual context in this study. The hypotheses considered in this study are all among the following three contexts: the (combined) individual, family and care history context. Regarding the individual context, we hypothesized first that the mean age of admission is lowest for foster children, on the basis of the current policy to refer a child to the least restrictive type of care (Chor, McClelland, Weiner, Jordan, & Lyons, 2013; Leloux-Opmeer, Kuiper, Swaab et al., 2016; Whittaker et al., 2015). Second, we hypothesized that the level of individual child issues (i.e., mental health, psychosocial, and school related-problems) is highest for residentially placed children. Especially the child's level of externalizing problems seems to be a contraindication for assigning a family-based setting such as foster care, because of an elevated risk for a breakdown (Aarons et al., 2010; Barber & Delfabbro, 2002; Barber, Delfabbro, & Cooper, 2001; Minty, 1999; Newton, Litrownik, & Landsverk, 2000; Strijker et al., 2008; Vanschoonlandt, Vanderfaeillie, Van Holen, & De Maeyer, 2012; Vanschoonlandt et al., 2013). The third hypothesis is linked to both the individual and family context, and specifically relates to family-style group care. In terms of intensity and restrictiveness, this setting falls between foster and non-secure residential care across the care continuum. Therefore, we expect that the level of child and family problems will also be in between those of foster and residentially placed children. Regarding the family context, foster care is particularly assigned when the biological parents (temporarily) cannot offer their child a healthy upbringing, which require a (least restrictive) alternative family setting. Consequently, the fourth hypothesis is that the level of family problems and individual parental problems (i.e., mental health disorders, addiction, material problems) will be highest for the biological families of foster children (Leloux-Opmeer, Kuiper, Swaab et al., 2016; Oswald, 2010). Fifth and finally, concerning the care history context, we expect the care history to be the longest and most serious for residentially placed children, because of the tendency to view residential care as a treatment of "last resort" (Barth, 2002; Frensch & Cameron, 2002; Huefner et al., 2010; Sunseri, 2005; Van IJzendoorn, 2008; Whittaker et al., 2015).

METHOD

Design, study population, and procedures

A cross-sectional study design was used among a population of Dutch school-aged children at the time of their admission to foster, family-style group, or non-secure residential care at Horizon. Horizon is a large organization that offers specialized care and educational services to young people with complex behavioral or conduct disorders (as well as to their families), excluding disabled children or those who need inpatient psychiatric care. The intensity and restrictiveness of Horizons services is comparable with those in other Dutch child youth care institutions. Data were collected from October 2012 to March 2014.

As regards to foster care, both types of foster families (kinship and non-kinship) were included in this study. Evidence regarding superior performance of either form of foster care is ambiguous or not conclusive (Holtan et al., 2013; Holtan, Rønning, Handegård, & Sourander, 2005; Oosterman et al., 2007; Strijker & Zandberg, 2004; Tarren-Sweeney & Hazell, 2005; Wilson et al., 2004). Additionally, when controlling for several key variables (e.g., age, gender, level of behavior problems, and level of family problems) no statistically significant differences were found between children in kinship and non-kinship care. Furthermore, this study emphasizes on the needs of the child and his family of origin, and less on foster placement factors such as type of foster family. Concerning family-style group care, the study also included 13 children who were enrolled in this type of care at five other Dutch youth care institutions to increase the number of participants in this subpopulation. Additionally, the number of respondents in family-style group care has been increased by use of 21 retrospective case file analyses of children who entered this type of care in Horizon in 2011 or the first nine months of 2012.

For the cross-sectional study, the following inclusion criteria for the children were used: (1) children were of primary school-age (4-12 years), (2) children were placed from either their birth home or another setting, and (3) their participation would not harm their treatment alliance with the childcare workers. The exclusion criteria were that: (1) a child was adopted or had severe intellectual disabilities, and (2) the placement was made on a crisis basis or in a secure residential youth care facility.

Data were collected using different questionnaires for the children's caregivers, by which we meant their biological parent(s) or, in some cases, their legal guardians. Additionally, several questionnaires were used for the children's foster parents, family-style group parents, or childcare workers (henceforth "substitute caregivers"), as well as for the behavioral scientist who guides the out-of-home care process. Case file information was also used. Children were not active participants in the study.

This study was not subject to the Medical Research Involving Human Subjects Act (WMO); as such, it did not need to be reviewed by the Medical Ethics Research Committee (which is charged with ensuring that protocols are in accordance with Dutch legislation). The research protocol complied with the Netherlands Code of Conduct for Academic Practice (Association of Universities in the Netherlands, 2014): (1) written permission was obtained from the caregivers, (2) all participants had the right to refuse or stop participation, and (3) to ensure anonymity, distorted case file numbers were used.

Participants

In total, nine cases were excluded in advance. Six of them because of a very premature placement breakdown, two cases due to rejection of the kinship foster family because of incapacity, and in one case participation was expected to harm the treatment alliance. Among the 244 eligible children identified, at least one questionnaire was completed for 200 of them (which corresponds to 82% of the intended sample). More specifically, the mean response rate was 40% for caregivers, 82% for substitute caregivers (inclusive of the 21 retrospective case file analyses), and 95% for behavioral scientists. These response figures are average to high in comparison to the overall response rate reported in health care research (Baruch & Holtom, 2008). Comparing demographic characteristics (i.e., gender, age), the participant and non-participant groups within the three main settings of out-of-home care revealed no differences for family-style group and residential care. In foster care, participants were more often male (46%) compared with non-participants (11%).

The total study sample consisted of 72 children in foster care, 38 children in family-style group care, and 90 residentially placed children. The participants' ages ranged from 4 to 13 years (M = 8.8, SD = 2.4) and 54% were boys. Significant differences were found in age, $F(2,197) = 8.09$, $p < .001$. Foster children (M = 7.9, SD = 2.6) were younger than children in family-style group (M = 9.2, SD = 2.5) and residential care (M = 9.3, SD = 2.1). No significant differences were found in the distribution of gender, $\chi2(2, N = 200) = 4.63$, $p =$ n.s. About half (56%) of all children had a Caucasian ethnic background; the rest (44%) had at least one parent who was born abroad (11% in a Western country and 33% in a non-Western country). No significant differences in ethnic background were found between the three subgroups , $\chi2(4, N = 151) = 3.85$, $p =$ n.s. Regarding foster children specifically, 39% were in kinship care and 14% were involved in therapeutic foster care (were therapeutic services are provided such as individual therapy).

Measures

A number of different measurement tools were selected to aid in gathering information for this study. These tools are briefly introduced below.

<u>Case file characteristics questionnaire (CCQ)</u>

The CCQ is a questionnaire designed by the authors to chart case file information systematically on demographic characteristics (e.g., age, gender, ethnicity), clinical characteristics (e.g., social-emotional problems, school or cognitive problems, child mental illness), family characteristics (e.g., family composition, clinical family problems), and care history characteristics (e.g., previous placements, child protective services) at admission. This 30-item questionnaire was completed by or under the supervision of a behavioral scientist. Most items of the CCQ were related to factual information, and all were categorized, and if possible, dichotomized (*yes/no*). For potentially ambiguous items which require some interpretation, a scoring protocol was available. The inter-observer reliability of the questionnaire was used to measure the intraclass correlation (ICC) of the CCQ (Field, 2009). Five files were scored with the CCQ by two raters. Based on the guidelines by Landers (2015), a two-way mixed model was used, with absolute agreement as a criterion. The mean

ICC (95% CI) was 0.66 (0.58, 0.72), which reflects a moderate inter-observer reliability (Shrout, 1998).

Child behavior checklist (CBCL)/1.5-5 and CBCL/4-18

The Dutch versions of these two checklists were used to identify psychosocial problems that were observed by caregivers and substitute caregivers (Achenbach & Rescorla, 2001; Verhulst, Van der Ende, & Hoolhans, 1996). The CBCL/1.5-5 and CBCL/4-18 ask informants to use a three-point scale (where 0 = *not true*, 1 = *sometimes true*, and 2 = *very true*) to respectively assess 99 and 120 items relating to behavioral and emotional problems. The summary scale t-scores of internalizing problems, externalizing problems, and total problems from both instruments were used in this study. Scores within or above the 80th percentile reflect performance in the (borderline) clinical range. Satisfactory psychometric characteristics for these scales have been reported (Greatest Lower Bound (GLB) > .91, test-retest reliability (*r*) > .83) in the literature with regard to the Dutch versions of the CBCL (Verhulst & Van der Ende, 2013).

Social emotional detachment questionnaire (SEDQ)

The Dutch version of the SEDQ (Scholte & Van der Ploeg, 2007), which was completed by the substitute caregivers, was used to obtain signs of social and emotional detachment in children aged 4 to 18. The questionnaire comprises 16 items that can be scored using a five-point scale (where 0 = *never true*, 1 = *sometimes true*, 2 = *regularly true*, 3 = *often true*, and 4 = *very often true*). This study utilized the total scale score of this questionnaire. Scores within or above the 95th percentile reflect evident social and emotional detachment. The SEDQ meets the psychometric standards required for research purposes (Scholte & Van der Ploeg, 2007). The internal consistency of the total scale measured with Cronbach's alpha is .92. The test-retest reliability (*r*) for this scale is 0.85 (Scholte & Van der Ploeg, 2007).

Student-teacher relationship scale (STRS)

The STRS is based on the presumption that a child's mental representation of attachment patterns is reflected in his or her relationship with significant adults (Koomen, Verschuren, & Pianta, 2007; Pianta & Nimetz, 1991). The Dutch version of this questionnaire was used to assess each substitute caregiver's perception of his or her parenting relationship with the out-of-home placed child. The STRS, which is applicable for children aged 3 to 12, consists of 28 items that are measured on a five-point scale (where 1 = *definitely not true*, 2 = *not really true*, 3 = *neutral/not sure*, 4 = *somewhat true*, and 5 = *definitely true*). This instrument provides three subscales (namely proximity, conflict, dependency) and a total scale score that reflects the general quality of the parenting relationship. Scores at or above the 90th percentile (specifically for the subscales conflict, dependency) and scores at or below the 10th percentile (specifically for the subscale proximity and the total scale) all fall within the clinical range. The STRS meets the psychometric standards required for research purposes (Koomen et al., 2007). The internal consistency of the total scale measured with Cronbach's alpha is .89, and the test-retest reliability (*r*) is .70 (Koomen et al., 2007).

Data analyses

The SPSS (Statistical Package for Social Sciences) 22 software was used to conduct the statistical analyses. To assess the clinical significance of the scores on all of the test instruments equally, raw scores were converted to T-scores (which are standardized scores with a mean of 50 and a standard deviation of 10) (Field, 2009). Prior to the analyses, data were inspected and test assumptions were verified. The data analyses consisted of two parts. The first component entailed using analysis of variance (ANOVA) to define similarities and differences between the three main settings of out-of-home care. A significant F-statistic indicates that samples have unequal means (Field, 2009). In these cases, inter-group differences were determined using the Bonferroni's post hoc multiple comparison test. Additionally the effect size using Cohen's *f* was computed. A value of .10 is considered to be small, .25 as medium and a value equal or above .40 as a large effect (Cohen, 1992).

In the second part of the data analyses, Chi-square tests were used to compare percentages between groups. Additionally, the effect size was determined using Cramer's V. A value of .10 stood for a small effect, .30 for a medium effect and a value of .50 for a large effect (Cohen, 1992).

RESULTS

Table 1 summarizes the characteristics at admission based on case file information gathered through the CCQ, arranged by context (of development) and setting. Table 2 summarizes the results of the test measures (i.e., the CBCL, the SEDQ, and the STRS), arranged by setting. The main findings on similarities and differences in characteristics of children placed in one of the three main settings of out-of-home care are presented below, arranged by the three contexts of development.

Results within the individual context

When it comes to age of admission to the current out-of-home placement, foster children are on average younger than children in family-style group and residential care (see Table 1). Furthermore in terms of age, in all three subgroups the first signs of psychosocial problems were reported on average at 3.8 (SD = 2.9) years of age, and professional help started on average at 4.5 (SD = 2.9) years of age.

Regarding the level of individual problems of the out-of-home placed children, first, based on case file information, the percentage of children with individual problems is highest in residential care (Table 1). These problems specifically concern behavioral problems, (an indication of) child mental illness and school related problems. As for mental illness, the most typical difference between the three subgroups was the incidence of autism spectrum disorders (ASD). No ASD diagnosis was found in (the case files of) foster children, while ASD diagnosis did occur approximately 1 in every 10 children in family-style group and residential care, $\chi^2(2, N = 170) = 8.56, p < .05$. When it comes to school related problems, residentially placed children specifically show conflicts with both classmates, $\chi^2(2, N = 135) = 11.86, p < .01$, and teachers, $\chi^2(2, N = 135) = 8.98, p < .05$, twice as frequently as children in foster or family-style group care. Second, caregivers equally report the most severe individual problems at admission for residentially placed children, especially when it comes to externalizing behavior problems (see Table 2). However, these results differ from those of

the substitute caregivers of residentially placed children. This leads to the third main finding that, according to the substitute caregivers, children in family-style group care demonstrate the most severe behavior problems at admission in comparison with children in foster or residential care (see Table 2). Additionally, results of the SEDQ showed that substitute caregivers of children in family-style group care perceive most signs of social and emotional detachment at the time of admission, especially in comparison with residentially placed children. Likewise, the highest percentage of children with a Diagnostic Statistical Manual of Mental Disorder (DSM-IV) classification of reactive attachment disorder was found in family-style group care (see Table 1). Finally, based on case file information as well as test results, foster children show the least and least severe individual problems.

Results within the family context

First of all, in all three subgroups at least three-quarters (78%) of all biological parents were divorced. Second, with reference to individual parental problems, in all three settings a more or less similar number of children (64%) had at least one biological parent with mental illness. However, it is noteworthy that foster children more commonly had fathers with mental illness (40%) than children in family-style group (19%) or residential care (20%), $\chi^2(2, N = 179) = 8.23, p < .05$. Third, also related to individual parental problems, material problems such as financial problems, housing problems, and unemployment occurred most frequently in the biological families of foster children (see Table 1). Fourth, when it comes to family functioning, poor parenting skills was the most frequently reported risk factor in the families of origin, especially for children in foster and residential care (see Table 1). Fifth, as regards family functioning, the highest percentage of neglected children was found in foster care. However, the percentage of children experienced physical abuse, emotional abuse, or both at their birth home is similar in all three types of care (see Table 1). Notably, no single foster child case file contains a record of (suspicions of) sexual abuse, in contrast to the files of children in family-style group (16%) or in residential care (5%). Finally, in contrast to the aforementioned main findings, the last risk specifically concerns an aspect within the foster family. Additional analyses of test results on the subscales of the STRS revealed differences in some dimensions of the quality of the parenting relationship (STRS) short after admission, in disadvantage of foster children. The first difference had to do with the degree of conflict, $F(2, 145) = 4.30, p < .05$. Foster parents perceive their relationship with the child as being more conflictual (T = 65, SD = 17) than childcare workers in residential care do short after admission (T = 58, SD = 12, $p < .01$). Also differences were found in the degree of dependency $F(2, 145) = 7.62, p < .001$. Foster parents reported more signs of negative dependency in the out-of-home placed child (T = 62, SD = 10) than childcare workers in residential care did (T = 55, SD = 11, $p < .05$).

Table 1
Summary table of defining characteristics when placed out-of-home, arranged by context and setting (based on case file information at admission).

	FC % (n)	FGC % (n)	RC % (n)	Test	Effect size
Individual context					
Mean age at admission (yrs.)	M = 7.9, SD = 2.6 $(72)_{a,b}$	M = 9.2, SD = 2.5 $(38)_{a}$	M = 9.3, SD = 2.1 $(90)_{b}$	$F(2,197) = 8.09^{***}$	.29
Emotional problems	71 (63)	77 (34)	70 (83)	$\chi^2(2, N = 180) = .52^{ns}$	.05
Behavioral problems	$56\ (63)_{a}$	$59\ (34)_{b}$	$90\ (83)_{a,b}$	$\chi^2(2, N = 180) = 25.38^{+++}$	.38
Reactive attachment disorder	$15\ (55)_{a,b}$	$41\ (32)_{b}$	$35\ (83)_{a}$	$\chi^2(2, N = 170) = 9.02^{+}$	.23
Mental illness (child)	$27\ (55)_{a}$	$44\ (32)_{b}$	$69\ (83)_{a,b}$	$\chi^2(2, N = 170) = 23.42^{+++}$	.37
School/cognitive problems	$52\ (52)_{a}$	65 (20)	$83\ (64)_{a}$	$\chi^2(2, N = 135) = 12.79^{++}$	.29
(Biological) family context					
Divorced parents	79 (62)	74 (34)	79 (77)	$\chi^2(2, N = 173) = .23^{ns}$	.04
Mental illness (parent)	73 (63)	50 (32)	62 (84)	$\chi^2(2, N = 179) = 5.08^{ns}$	.17
Material problems/poverty	$75\ (63)_{a,b}$	$50\ (32)_{b}$	$44\ (84)_{a}$	$\chi^2(2, N = 179) = 14.18^{+++}$	.28
Poor parenting skills	89 (63)	69 (32)	88 (84)	$\chi^2(2, N = 179) = 7.97^{+}$	.21
Child neglect (physical/emotional)	$60\ (63)_{a}$	44 (32)	$31\ (84)_{a}$	$\chi^2(2, N = 179) = 21.63^{++}$	.27
Child abuse (physical/emotional)	25 (63)	31 (32)	18 (84)	$\chi^2(2, N = 179) = 2.70^{ns}$	.12
(Suspicions of) child sexual abuse	$0\ (63)_{a}$	$16\ (32)_{a}$	5 (84)	$\chi^2(2, N = 179) = 10.87^{++}$	.25
Care history context					
Admission from birth home	$65\ (63)_{a,b}$	$18\ (34)_{b,c}$	$43\ (83)_{a,c}$	$\chi^2(6, N = 180) = 35.91^{+++}$	.34
Previous placements	$53\ (62)_{a,b}$	$94\ (34)_{a,c}$	$70\ (84)_{b,c}$	$\chi^2(2, N = 180) = 17.27^{+++}$	.31
Mean previous placements	M = 0.8, SD = 1.1 $(56)_{a,b}$	M = 2.3, SD = 1.5 $(32)_{a}$	M = 1.6, SD = 1.8 $(83)_{b}$	$F(2, 168) = 9.98^{***}$	.11
Child protective service custody (%)	$78\ (63)_{a}$	$94\ (34)_{a,b}$	$70\ (84)_{b}$	$\chi^2(2, N = 181) = 7.89^{+}$	.21

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.
Note: Means with the same subscript differ significantly.
$^{+}p < .05$; $^{++} < .01$; $^{+++}p < .001$ (chi-square test with Cramer's V).
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$ (ANOVA with Cohen's f).

Table 2
Summary table of T-scores (SD) for at-admission test data, arranged by questionnaire and setting (based on data from caregivers and substitute caregivers).

	FC T (*SD*)	FCG T (*SD*)	RC T (*SD*)	ANOVA	Effect Size (Cohen's *f*)
ASEBA caregivers	***n* = 31**	***n* = 8**	***n* = 55**		
Total behavior problems	56 $(11)_a$	55 $(13)_b$	68 $(9)_{a,b}$	$F(2, 91) = 14.72^{***}$	.56
Internalizing problems	56 (11)	55 (12)	63 (11)	$F(2, 91) = 3.71^{*}$	.29
Externalizing problems	56 $(11)_a$	56 $(13)_b$	68 $(9)_{a,b}$	$F(2, 91) = 16.00^{***}$	.59
ASEBA substitute caregivers	***n* = 48**	***n* = 21**	***n* = 86**		
Total behavior problems	58 $(12)_a$	67 $(12)_{a,b}$	60 $(10)_b$	$F(2, 152) = 6.37^{**}$	.29
Internalizing problems	57 (12)	62 (11)	57 (10)	$F(2, 152) = 1.68^{ns}$	.14
Externalizing problems	55 $(12)_a$	66 $(13)_a$	59 (12)	$F(2, 152) = 6.65^{**}$	.29
SEDQ substitute caregivers	***n* = 45**	***n* = 16**	***n* = 86**		
Social emotional detachment	65 (17)	72 $(16)_a$	61 $(13)_a$	$F(2, 139) = 4.38^{*}$	.27
STRS *substitute caregivers*	***n* = 45**	***n* = 15**	***n* = 88**		
Total STRS score	64 (15)	64 (15)	58 (12)	$F(2, 145) = 2.96^{ns}$	.20

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.
Note: Means with the same subscript differ significantly.
Note: T-scores from 60 to 64 are in the borderline clinical range. T-scores above 64 are in the clinical range.
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$

Results within the care history context

To start with, a main finding is the small number of children who enter family-style group care from birth home. According to case file information this percentage is more than three times lower than in foster care and more than two times lower than in residential care (see Table 1). Differences in prior use of residential care are related to this ($F(2, 174) = 19.06$, $p < .001$). Children placed in family-style group care (M = 1.3, SD = 1.1) have previously experienced residential care more often than foster (M = 0.2, SD = 0.6, $p < .001$) or residentially placed children (M = 0.8, SD = 0.9, $p < .01$). This suggests that children in family-style group care relatively more often enter this setting from residential care. Second, information on former placements is noteworthy. In general, 69% of the participants have experienced previous placements. A significant portion (20%) has even been placed at least three times, with a maximum of nine placements being reported. The highest percentage of children with a history of previous placements was found in family-style group care, namely 94%. Likewise, children in family-style group care do have the highest average number of previous placements, particularly in comparison with foster children ($p < .001$). A third main finding relates to child protective service custody. Most common form is family supervision (64% of the entire participant population). The percentage of children in child protective service custody was highest in family-style group care (see Table 1).

DISCUSSION

To date no evidence-based criteria are available for referral to the various types of (non-secure) out-of-home care for children (Chor et al., 2012; Lee, 2010; Strijker et al., 2002). Due to this, policies other than the clinical needs of the child and the family often determine the 24-h setting (foster, family-style group, residential care) the child is referred to for out-of-home care (Barth, 2002; Bhatti-Sinclair & Sutcliffe, 2012; Broeders et al., 2015; Curtis et al., 2001; Frensch & Cameron, 2002; Huefner et al., 2010; James et al., 2004). For many years, however, substantial numbers of breakdowns are observed in all three types of out-of-home care. These seem mostly related to a mismatch between the child and family risks and needs on one hand and the referral on the other. It has been suggested that these mismatches can be prevented by using an evidence-based risk-need-responsivity model for out-of-home placement of children (Anderson et al., 2003; Chor et al., 2012; Fallon et al., 2006; Lyons et al., 1998).

In secure residential care, a risk-need-responsivity model already exists for guiding offender assessment and treatment (Andrews et al., 2011). This study aims to contribute to the development of such a model specifically for school-aged children with serious psychosocial needs for referral to non-secure out-of-home care. To this end, similarities and differences in the (child's) individual, family, and care history context of Dutch school-aged children at admission to foster, family-style group, and residential care were investigated. Five hypotheses covering this subject were presented in the introduction. Regarding these the following conclusions can be drawn from our data.

Our first hypothesis states that the age of admission of foster children is lower than the age of admission of the children in family-style group and residential care. Our data support this hypothesis. However, from a developmental perspective the difference in mean age of admission can be interpreted as small, since all children were at elementary school-age (first to fourth grade). Nevertheless, since the age of admission is related to the length of care history, the differences in mean age found are important from this perspective. as will be argued beyond.

The second hypothesis is that the severity of the individual problems of the child at admission is highest for residentially placed children. This hypothesis was largely confirmed: findings from both case file information and the caregiver's ASEBA test results stated that the degree of behavioral problems at admission was highest among residentially placed children. Furthermore, the percentage of children disadvantaged by mental illness was the highest in residential care. Residentially placed children further showed the highest degree of school/learning problems. Both Courtney (1998) and James (2006) suggest that this high percentage of children with severe individual (behavior) problems in residential care would reflect the tendency of welfare workers to refer these children to more restricted (residential) care. Conversely, the ASEBA test results of substitute caregivers seem to argue against this hypothesis, since these results suggest that the children in family-style group care instead of residentially placed children have the severest behavioral problems. However, this finding does not completely refute our second hypothesis. In sum, residentially placed children appear to be most disadvantaged by multiple individual problems, as literature demonstrate that both behavioral problems, mental illness, and school/learning problems negatively affect

placement outcomes (Barber & Delfabbro, 2002; Bartelink, 2013; Becker, Jordan, & Larsen, 2007; Den Dunnen et al., 2012; Jones et al., 2011; Raviv, Taussig, Culhane, & Garrido, 2010; Taussig, 2002).

The third hypothesis suggest that the level of child and family problems for children in family-style group care is between those of foster and residentially placed children. This hypothesis was not confirmed in this study, since the most severe risk factors were witnessed in children placed in family-style group care. Specifically noteworthy is the prevalence of attachment-related problems in these children, demonstrated through the SEDQ test results of substitute caregivers and case file information. This is contrary to the suggesting of Lee (2010) that children with these problems are approximately 75% less likely to be placed in a family-based setting. Furthermore, findings from the ASEBA test results of the substitute caregivers showed that the degree of behavioral problems is highest for children in family-style group care. This might be related to the reported attachment problems, as literature show that attachment problems are partially positively related to behavior problems (Newton et al., 2000; Vanschoonlandt et al., 2012). Lastly, the case files of children in family-style group care reported most frequently suspicion of a history of child sexual abuse. According to Petrenko, Friend, Garrido, Taussig, and Culhane (2012) such a history also affects the level of externalizing problems (as being a trauma-related symptom). Altogether the results suggest that the quality of attachment as well as the prevalence of child sexual abuse are relevant risk factors in the individual context of children in family-style group care, since both attachment problems (Oosterman et al., 2007; Strijker et al., 2008) and a history of sexual abuse (Eggertsen, 2008; Petrenko et al., 2012) are related to negative long-term placement outcomes.

The fourth hypothesis states that the level of family and individual parental problems will be highest for the biological parents of foster children. The study results partially confirmed this hypothesis. Many biological parents of foster children were reported to have mental problems (especially fathers), which reflects the findings of Minnis, Minnis, Everett, Pelosi, and Dunn (2006) and Lee and Thompson (2008). Additionally, the high rate of material problems among these families of origin was remarkable, but similar to what was found by James, Roesch, et al. (2012). Furthermore, the percentage of foster children that experienced physical or emotional neglect, although corresponding to the literature (Bernedo, Salas, Fuentes, & García-Martín, 2014; James, Roesch, et al., 2012; Lee & Thompson, 2008; Strijker & Knorth, 2009; Tarren-Sweeney, 2008a; Yampolskaya, Sharrock, Armstrong, Strozier, & Swanke, 2014), was almost twice the percentage of children in family-style group or residential care. On the other hand, some family risk factors were not unique to children in foster care. Both the number of broken families, the number of children exposed to poor parenting skills and the prevalence of physical and emotional child abuse were the same for all three types of care. Further, it is noteworthy that no foster child's case file contains (signs of a) history of sexual abuse, which seems unlikely given that literature shows that 10% of foster children have on average experienced such abuse (Bernedo et al., 2014; James, Roesch, et al., 2012; Scholte, 1997; Strijker et al., 2008; Tarren-Sweeney, 2008a). The current study's finding therefore probably reflects an underreporting. In sum, especially the number of parents with mental problems, material problems and a history of child neglect in the family of origin are major risk factors for foster children, since these may affect placement outcomes

adversely (Amato, 2010; Bartelink, 2013; Boyer, Hallion, Hammell, & Button, 2009; Breivik & Olweus, 2006; Den Dunnen et al., 2012; Garrido, Culhane, Petrenko, & Taussig, 2011; López, del Valle, Montserrat, & Bravo, 2013; Marquis, Leschied, Chiodo, & O'Neill, 2008; Raviv et al., 2010; Xue, Hodges, & Wotring, 2004). Also, material problems as well as parental mental illness specifically enhance the likelihood of an out-of-home placement in the first place (Barber & Delfabbro, 2002; Esposito et al., 2013; Perlman & Fantuzzo, 2013).

Ultimately, the study did not confirm the final hypothesis that the care history would be the longest and most severe for residentially placed children. Opposite to literature findings (Barth, 2002; Frensch & Cameron, 2002; Huefner et al., 2010; Sunseri, 2005; Van IJzendoorn, 2008; Whittaker et al., 2015), this was the case for children in family-style group care. The differences in care history (e.g., in terms of child protective service custody, history of residential care) cannot merely be explained by the small differences in age of admission (1.3 years). Our findings suggest that it is more likely that the majority of children in family-style group care were firstly placed in residential care due to the child's level of (externalizing) behavior problems and treatment needs, after which the child was being placed in family-style group care to offer a (long-term) professional family setting (corresponding to the UN guidelines). This might indicate (at least in the Netherlands) that family-style group care instead of residential care is selected more and more as placement of last resort after a series of placements. In sum, children in family-style group care are in particular at a disadvantage by their long and severe care history, since the length of time in care negatively affects placement outcomes (Bartelink, 2013; Courtney, 1998; James, 2006; James, Zhang, et al., 2012; Jones et al., 2011; Oosterman et al., 2007; Strijker et al., 2008).

Limitations

The strengths of this study were the triple comparison of characteristics of children in the three main types of care, and the use of multiple sources and informants. However, some limitations should be considered in relation to the study's results. The number of children in family-style group care participating in this study was limited, which may have affected the power of the analyses. As such, the results should be interpreted with some caution. However, as the literature provides little data concerning children in this type of care, the current results still contribute to filling a knowledge gap. Our study further showed that specific data concerning relevant aspects of school performance (i.e., language and math skills) and family functioning (i.e., parental drug abuse, domestic violence) are not systematically reported in case files. The comparison between the three subgroups would have been more complete if full information could have been retrieved. Children with a history of previous placements were also included in this study. It has been suggested that this potentially contributes to a higher level of behavior and attachment problems (Strijker et al., 2008). However, Barber and Delfabbro (2002) state that this approach best approximates reality, since most children in care have experienced a previous placement. Ignoring this reality would therefore make the results less applicable. Besides, randomly allocating children to the three types of care would have caused serious ethical problems. As stated by Wilson et al. (2004), the allocation to different treatments is rarely made 'blind' in social work.

Implications

Notwithstanding its limitations, the triple comparison of the characteristics of school-aged children at admission to one of the three main types of out-of-home care (foster, family-style group, residential care) suggests some setting-specific guidelines to increase the effectiveness of out-of-home care. First, according to our findings, biological parents in foster care seem most in need of assistance in achieving a healthy family environment specifically by guidance towards mental health services and financial services. Additionally, foster parents need support in establishing a positive parenting relationship with their foster child during placement. Second, concerning family-style group care, the level of attachment and trauma-related problems measured, probably requires extra professional or therapeutic support to both the family-style group parents as for children placed in this type of care. Third, concerning residentially placed children, both their behavioral problems, mental illness, and school/learning problems require an intensive (group and individual) counseling program. If residential care is enhanced with therapeutic modules, it may lessen its questionable image and may become a serious option of choice again for youngsters at risk for complex behavioral, personal and social problems. Finally, the study demonstrates that the majority of children in family-style group care were placed in residential care firstly. This might indicate that family-style group care has switched positions with residential care on the continuum of care towards the position of placement of last resort (at least in the Netherlands). It is recommended to discuss this shift, and to redefine the role and goals of every setting of out-of-home care more specifically.

Conclusion

In general, this study showed several differences in the risks and needs of children and their families at the time of admission to foster, family-style group, or (non-secure) residential care. The results may contribute to the development of a risk-need-responsivity model to support the decision-making process for referral to non-secure out-of-home care, with the ultimate goal to maximize the chances of long-term placements in a family-based setting (i.e., foster and family-style group care) or residential setting, or even at home. In order to develop such a model (which will increase the likelihood of positive child development), the outlined risks and needs at the time of admission should further be matched with the developmental progress children will make during their out-of-home placements.

4 SIMILARITIES AND DIFFERENCES IN THE PSYCHOSOCIAL DEVELOPMENT OF CHILDREN PLACED IN DIFFERENT 24-H SETTINGS

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Journal of Child and Family Studies (2017), *27*(4), 1299-1310

ABSTRACT

Similarities and differences in the (short-term) psychosocial development of children in foster care, family-style group care, and residential care were investigated in a sample of 121 Dutch children (*M* age = 8.78 years; SD = 2.34 years; 47% female; 59% Caucasian) one year after their initial placement. Pretest and posttest measurements were carried out at the substitute caregivers using the CBCL. The results were examined at group level and case level. At group level, the findings showed no evidence for higher effectiveness in favor to the family-oriented settings (foster care, and family-style group care), as hypothesized. By contrast, some small differences were found between foster care and family-style group care, in favor of the latter. At individual level, a more or less equal number of children (18%) with a clinical pretest score on psychosocial functioning clinically significant improved (behavioral normalization). An important concern is that a number of children without clinical psychosocial problems at the time of admission clinically significant deteriorated (behavioral aberration) in psychosocial functioning (20%). This might indicate a poor match between the risks, needs and responsivity of the child on the one hand and the chosen intervention on the other. Future research on factors that (prior and during placement) positively as well as negatively affect the child's psychosocial development is needed to further clarify this finding.

INTRODUCTION

Out-of-home placement is considered to be a good alternative when in-home (support) services insufficiently provides in a safe parenting climate and positive development of the child (Pinto & Maia, 2013; Vanschoonlandt, Vanderfaeillie, Van Holen, De Maeyer, & Robberechts, 2013). Out-of-home (24-hr) care can be perceived as a continuum of services which vary in their intensiveness and restrictiveness, ranging from least restrictive types of care (e.g., kinship or non-kinship foster care) to family-based settings with paid caregivers (family-style group care) to placement in a residential setting (Huefner, James, Ringle, Thompson, & Daly, 2010; Washington State Department of Social and Health Services: Children's Administration, 2014).

In foster care, a child is placed with relatives (kinship foster care) or with a licensed foster family, mostly due to concerns for its safety. In case of short-term foster care, the child stays temporarily with a foster family, while the biological parents are supported to improve their family circumstances in preparation for reunification (Strijker, Knorth, & Knot-Dickscheit, 2008). When reunification is no option, a foster family provides a stable alternate rearing situation in a family setting until the child reaches the age of 18 (long-term foster care) (Strijker et al., 2008). In contrast to the foster care process in the United States, adopting a foster child is very unusual in the Netherlands and other European countries (Holtan, Handegård, Thørnblad, & Vis, 2013).

Family-style group care can be perceived as an intermediate type of care between foster care and residential care (Barth, 2002; Huefner et al., 2010). It is commonly used for children who are in need of professional supervision in a family-based setting (De Baat & Berg-le Clercq, 2013). Many synonyms are in use for this type of care (e.g., teaching family homes, family type homes, SOS children’s villages, socio-pedagogical homes) (Harder, Zeller, Lopez, Köngeter, & Knorth, 2013; Whittaker et al., 2015). A typical family-style group home (mostly situated in a neighborhood), is where a group of six to eight children reside and receive daily professional supervision from group home parents (mainly a married couple), who are mostly pedagogically trained and live at the setting (Ringle, Ingram, & Thompson, 2010; Whittaker et al., 2015).

The term “residential care” reflects a continuum of 24-hr services that vary from open residential to secure residential to inpatient psychiatric care (Barth, 2002; Whittaker et al., 2015). Residential settings vary in their size, target group (e.g., delinquents, disabled children, children with mental health disorders), and in the therapeutic components available, and serve children with specialized treatment needs (Chor, McClelland, Weiner, Jordan, & Lyons, 2012; Whittaker et al., 2015). Two essential differences between residential care and family-based settings such as foster and family-style group care can be highlighted. First of all, in residential care children are supervised by 24-hr shift staff who are not residents of the home (Berrick, Courtney, & Barth, 1993; Butler & McPherson, 2007). Additionally, residential treatment has an integrated treatment team in a therapeutic milieu at its disposal, to provide a consistent, integrated and extended treatment that a family setting can hardly offer by the strain or duration of distress that inevitably arises (Butler & McPherson, 2007). However, fundamental purpose of (all types of 24-hr) out-of-home care services is to provide

for the child's safety and to promote positive child development, though in different ways (Adoption and Safe Families Act of 1997, 1997).

There are no evidence-based guidelines regarding which type of 24-hr out-of-home care is the most suitable for a child undergoing whichever circumstances that require out-of-home placement (Courtney, 1998; James, Roesch, & Zhang, 2012). The current policy is that a "least restrictive" and family-oriented setting is preferred, such as foster care or family-style group care (Harder et al., 2013; United Nations, 2009, December 18). Opinions vary regarding the added value of residential care (Strickler, Mihalo, Bundick, & Trunzo, 2016; Whittaker et al., 2015). Among the known disadvantages of residential care are its cost (James, 2011; Whittaker et al., 2015), and its controversial effectiveness (Knorth, Harder, Zandberg, & Kendrick, 2008; Strijbosch et al., 2015; Van IJzendoorn et al., 2011; Whittaker et al., 2015). Nevertheless, residential care is currently an integral part of the care continuum (James, Roesch, et al., 2012; López & del Valle, 2015; Preyde et al., 2011). In addition, various published studies suggest that residential care is suitable and effective for children with certain, often severe, risks and needs (Chor et al., 2012; Conn, Szilagyi, Jee, Blumkin, & Szilagyi, 2015; De Swart et al., 2012; Whittaker et al., 2015). Moreover, the UN Guidelines for the Alternative Care of Children (henceforth "UN guidelines") state that residential care can be preferable if it is necessary and constructive in the interest of the child (United Nations, 2009, December 18).

The discussion about the added value of residential care within the continuum of care in case of out-of-home placement mirrors two underlying themes. The first is the difference in how the "least restrictive" policy is interpreted. Currently, care allocation appears to be based on a multi-stage procedure which initially starts by providing a least restrictive type of care (usually foster care), which then has to prove to be ineffective before more restrictive types of care are implemented. This method, however, implies that a well-informed referral decision for the type of care which would be most responsive to the child's specific presenting problems plays a secondary role in the care allocation (Sunseri, 2005; Whittaker et al., 2015). For a certain group (usually children with severe problems) this method results in a long history in social services, involving several placements and replacements which then reduces the chance of achieving favorable outcomes (James, Zhang, & Landsverk, 2012; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007). Moreover, care allocation is also affected by other factors than the child's clinical needs such as resource availability (Broeders, Van der Helm, & Stams, 2015), or local referral policy (Huefner et al., 2010), due to the lack of an evidence-based assessment tool to support the decision-making process (Chor et al., 2012).

The second underlying theme reflects the discussion on the usefulness of residential care with regard to the problems this sector has in demonstrating its effectiveness (Whittaker et al., 2015). First of all, comparisons are hampered by the use of the term "residential care" as a collective name for all types of 24-hr care in a service-providing institute. These facilities vary in their size, in reason for placement (crisis, care, cure), in location (in or out of the community), and in their therapeutic components (James, Zhang, et al., 2012; Whittaker et al., 2015). In addition, the comparison of effectiveness is confounded by the differences in the characteristics of the target groups at admission (i.e., age, degree of behavioral problems and care history) between children in foster care, family-style group care and residential care (Butler & McPherson, 2007, 2017; Conn et al., 2015; Den Dunnen et al., 2012). These

differences in treatment contexts and the differences in risks, needs and responsivity at admission, mean that the comparability of the outcomes of the existing types of care is limited (James, Roesch, et al., 2012; Preyde et al., 2011). This is why different researchers propose that a more realistic depiction of treatment effectiveness would be acquired if the outcomes in the different types of care were compared with the specific baseline situations with which the children and their families initially entered care (Conn et al., 2015; McCrae, Lee, Barth, & Rauktis, 2010).

The aim of this study is to answer the question how the type and severity of psychosocial functioning at the time of admission affect the degree of (short-term) psychosocial development in different types of out-of-home care. To this end, similarities and differences in the psychosocial development of the out-of-home placed children were investigated at group level as well as at individual level during the first year (with a minimum of three months) after initially being placed in foster care, family-style group care and open residential care. First, we expect that foster children and children in family-style group care will experience a more favorable psychosocial development than children placed in residential care. Second, we hypothesize that children with severe psychosocial problems at admission develop less favorably at group level as well as at case level than children who do not have significant problems in this area. Additionally, we expect this prediction to be most clearly reflected in foster care.

METHOD

Participants

The study was part of a larger cross-sectional cohort study with a broad set of instruments and informants. The study population consisted of Dutch out-of-home placed primary school children (aged 4-12) in foster care (kinship or non-kinship), family-style group care and open residential care. In this particular study only cases from who a Child Behavior Checklist (CBCL) pretest of the substitute caregiver was available, were included. The inclusion process is represented in the flowchart in Figure 1. Of the 158 cases who were included in the first, cross-sectional study, 17 cases were excluded because they did not meet the inclusion criteria for the posttest, mainly due to premature departure (n = 11). Of the 141 cases examined for eligibility, a posttest was completed by a substitute caregiver in 121 cases, with a mean response rate of 86% (foster parents 73%, family-style group parents 74%, group care workers 95%). The response rate was calculated by dividing the number of included respondents by the number of respondents examined for eligibility for the posttest (Morton, Cahill, & Hartge, 2006; Sitzia & Wood, 1998; The American Association for Public Opinion Research (AAPOR), 2011). The response rate is comparable with the median participation rate of 80% in cohort studies (Morton et al., 2006) and lies above the mean response of 61% of written questionnaires as reported by Cummings, Savitz, and Konrad (2001).

More important than the percentage of the response rate was to establish if the response group in the cohort study (n = 121) was representative for the eligible cases. Therefore, we compared the most important core pretest variables of this group with those of the group that was excluded because of non-eligibility or non-response (n = 37) (Galea & Tracy, 2007; Werner, Praxedes, & Kim, 2007). We found no significant differences, and effect sizes were

negligible between the inclusion group and the exclusion group with regard to gender, child protective service custody, ethnicity, and socio-economic status (using Fisher's exact tests). The same was true with regard to age at admission, degree of behavioral problems, degree of fundamental detachment, total care history, and total number of (re)placements (using two-tailed independent t-tests).

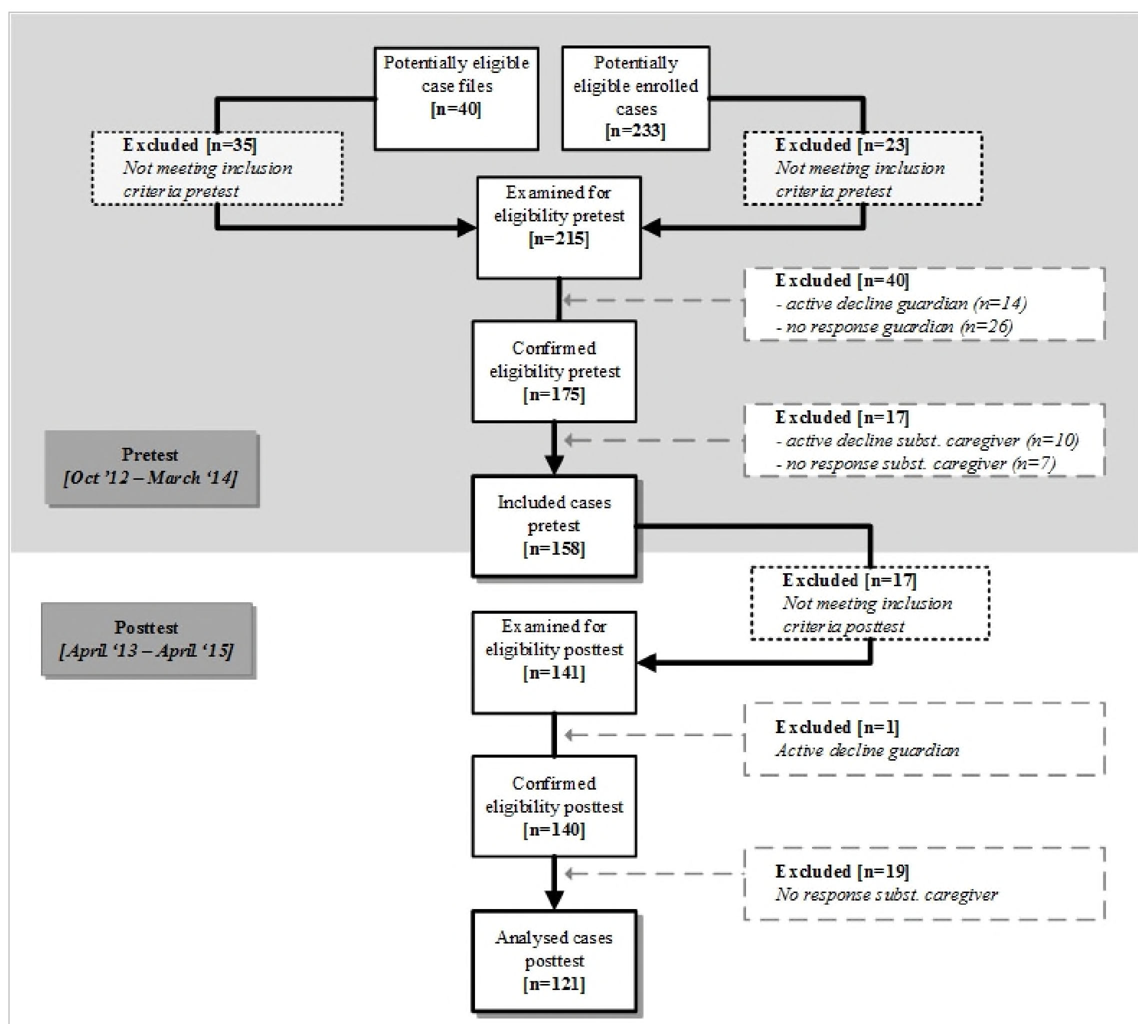

Figure 1. Flowchart showing the inclusion process for cases with a CBCL pre and posttest from substitute caregivers

One third of the participating foster families was a kinship family. The mean number of children in the foster homes was 3.6 (SD = 1.3), with a mean number of 1.9 (SD = 1.3) biological children. Seventeen percent of the foster children received therapy or medication supplementary to the placement. Additionally, 13% went to special education. The participating foster parents, foster children and biological parents were counseled by foster care workers and a behavioral scientist. The participating family-style group homes accommodated an average of six (SD = 2.0) children, with a mean number of 1.4 (SD = 1.3) biological children. The group home parents received supervision from group home workers and a behavioral scientist, and they maintained contact with the biological parents. One in three children received therapy or medication, and 70% received special education. The

included children in open residential 24-hr care were placed in a structured living group (8-10 children), guided by group care workers and a behavioral scientist. In addition to group therapy, 48% received individual therapy or medication, and all children went to an incorporated school for special education.

Procedure

Substitute caregivers were recruited from Horizon; a large Dutch organization for youth care and special education. The family-style group parents in the cohort study were paid employees or independent entrepreneurs. The subgroup was supplemented by two third with children from independent family-style group homes associated with other, comparable Dutch youth care organizations. In addition, we partially complemented the subgroup (14%) using retrospective record analysis of primary school children who went through intake for a family-style group home of Horizon in 2011 or the first 9 months of 2012.

The data collection took place between April 2013 and April 2015. It comprised a posttest a minimum of three months and a maximum of one year after the pretest. The following were the inclusion criteria: (1) participation would not harm the treatment alliance with the parents, (2) a CBCL pretest of the substitute caregiver was available against which the posttest could be compared, and (3) there was a minimum of three months between the pretest and posttest. The exclusion criteria involved: (1) children in a crisis placement or placement in secure residential youth care, and (2) adopted children or children with profound intellectual disabilities (IQ < 70).

The cohort study was not subject to the Medical Research Involving Human Subjects Act (WMO) and was therefore not put before a medical ethics review committee. The study procedure satisfied the Netherlands Code of Conduct for Academic Practice (Association of Universities in the Netherlands, 2014): (1) written consent was requested from the guardians before participation in the cohort study, (2) participants could withdraw from the study without explanation, and (3) file numbers were distorted to guarantee the participants' anonymity.

Measures

To determine the psychosocial development of the out-of-home placed children, we used two assessments forms of the Achenbach System of Empirically Based Assessment (ASEBA), specifically the Child behavior checklist (CBCL)/1.5-5 and CBCL/4-18. The Dutch versions of these two checklists were completed by substitute caregivers at the time of the pretest and posttest (Achenbach & Rescorla, 2001; Verhulst, Van der Ende, & Hoolhans, 1996). The CBCL/1.5-5 and CBCL/4-18 ask informants to use a three-point scale (where 0 = *not true*, 1 = *sometimes true*, and 2 = *very true*) to respectively assess 99 and 120 items relating to behavioral and emotional problems. The summary scale T scores of emotional (internalizing) problems (i.e., somatic complaints, withdrawn, and anxious/depressed behavior), behavioral (externalizing) problems (i.e., aggressive and delinquent behavior), and total psychosocial problems from both instruments were used in this study. Achenbach and Rescorla (2001) suggest to use T scores of 60 or above to discriminate between children with and without (borderline) psychosocial problems. The psychometric characteristics of the CBCL are regarded as satisfactory (Achenbach & Rescorla, 2001).

A case file characteristics questionnaire (CCQ) was designed to chart file information systematically on demographic characteristics (e.g., age, gender, ethnicity), clinical characteristics (e.g., psychosocial problems, school or cognitive problems, child mental illness), family characteristics (e.g., family composition, clinical family problems), and care history characteristics (e.g., previous placements, child protective services) at admission. This 30-item questionnaire was completed by or under the supervision of a behavioral scientist. Most items of the CCQ were related to factual information, and all were categorized, and if possible, dichotomized (*yes/no*). For potentially ambiguous items which require some interpretation, a scoring protocol was available. The inter-observer reliability of the questionnaire was used to measure the intraclass correlation (ICC) of the CCQ (Cohen, 1992). Five files were scored with the CCQ by two raters. Based on the guidelines by Landers (2015), a two-way mixed model was used, with absolute agreement as a criterion. The mean ICC (95% CI) was 0.66 (0.58, 0.72), which reflects a moderate inter-observer reliability (Shrout, 1998).

Data analyses

SPSS 23 (Statistical Package for Social Sciences) was used for the data analysis. With Pearson's correlation coefficient for continuous variables, and Student's t-test for discrete variables we examined the effect of several important control variables which were distracted from literature data, on the outcome measure (difference scores on the CBCL). Assessment of the preconditions of all statistical tests were carried out before the analysis. Outliers were tested by calculating standardized z-scores. Responses with a z-score greater than 3.29 ($p < .001$, two-tailed test) were regarded as outliers (Cohen, 1992). We handled outliers by taking the next highest score plus one unit (Cohen, 1992).

We investigated the psychosocial development in out-of-home placed children during the first year of placement using 3 x 2 (Setting x Time) repeated measure (RM) ANOVAs with Sidak tests for multiple comparisons. This technique corrects for variation created by individual differences in performance (Cohen, 1992). The size of the significant change was represented with partial eta squared. A value of .01 reflected a small effect, .06 for a medium-sized effect and .14 for a large effect (Cohen, 1992).

We examined the influence of the psychosocial functioning at admission on the degree of development with 3 x 2 factorial ANOVAs followed by Sidak tests for multiple comparisons. Three new dependent variables were produced with difference scores (T0 - T1) on psychosocial functioning, emotional functioning and behavioral functioning, in which a positive difference score reflected a positive development. One extreme outlier was found within the subgroup family-style group care for the difference score in behavioral problems ($T_{diff} = 30$). This score was replaced by the next high score plus one unit ($T_{diff} = 23$).

To gain insight into the individual development of children, we calculated the Reliable Change Index (RCI) (Jacobson & Truax, 1991; Kline, 2004). An RCI greater than 1.96 or smaller than -1.96 was regarded as statistically significant, corresponding to the significance value of $p < 0.05$ (Jacobson & Truax, 1991). A positive significant RCI indicated progress in individual development and a negative significant RCI indicated deterioration. A non-significant RCI meant there was no change. If the progress was accompanied by a transition of the clinical or subclinical to the normal domain of the CBCL, then a clinically significant

improvement took place (Jacobson & Truax, 1991). A shift from the normal range to the (sub)clinical range implied a clinically significant deterioration. Fisher's exact test was used to investigate the association between the individually significant change and the offered type of care (Cohen, 1992). The effect size was determined using Cramer's V and could lie between 0 and 1 (Field, 2009). A value of 0.10 represented a small effect, 0.30 for a medium-sized effect and a value equal to or greater than .50 for a large effect (Cohen, 1992). In all cases a two-tailed test was used and *p*-values less than 0.05 were interpreted as statistically significant.

RESULTS

Of the analyzed cases for which both a pre and posttest on the CBCL were available, 30 came from foster care, 14 from family-style group care, and 77 from open residential care. See Table 1 for some of the demographics. Foster children were on average younger then children in family-style group and residential care at time of the admission. As regards gender, the subgroup children in family-style group care consisted of less boys compared to foster and residential care. Finally, the time between the pre and posttest (mean placement duration) was slightly higher for children in family-style group care than for foster children and children in residential care. In general, the placement was terminated at the time of the posttest for 22% of the included cases.

Prior to the analyses, the influence of several core pretest variables on the outcome variables (difference scores on the CBCL) has been examined (see Table 2). Preliminary analyses showed medium sized significant Pearson's correlations between the psychosocial functioning at admission and the degree of psychosocial development. Therefore, the influence of the baseline situation on the psychosocial development was subsequently investigated explicitly by adding it as a factor in the factorial analyses, in which children with a T-score of 60 or higher at admission were included in the "clinical group". No significant associations were found between the development of psychosocial functioning and the discrete variables gender, socio-economic status, and ethnicity (measured with two-tailed independent Student's t-tests).

Table 1
Demographic characteristics at baseline for children in foster care, family-style group care and residential care.

	FC (n_{max} = 30)	FGC (n_{max} = 14)	RC (n_{max} = 77)	Test	Effect size
Gender (% male)	43	29_a	61_a	$\chi^2(2, N = 121) = 6.47^+$	0.23
Race (% Caucasian)	63	67	56	$\chi^2(2, N = 93) = 0.72^{ns}$	0.09
Child protective services (%)	90	83	73	$\chi^2(2, N = 115) = 3.99^{ns}$	0.19
SES (% low)	50	50	62	$\chi^2(2, N = 25) = 0.34^{ns}$	0.12
Mean age at admission (yrs.)	M = 7.5, SD = $2.5_{a,b}$	M = 9.7, SD = 2.1_a	M = 9.1, SD = 2.1_b	F(2, 120) = 6.97**	0.11
Time between pre and posttest (mo.)	M = 13.0, SD = 1.7_a	M = 15.4 SD = $2.2_{a,b}$	M = 12.7, SD = 1.6_b	F(2, 120) = 15.05***	0.20

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.
Note: Means with the same subscript differ significantly.
$^+p < .05$ (Chi-square test with Cramer's V).
** $p < .01$, *** $p < .001$ (ANOVA with η^2).

Table 2
Descriptive information and correlations between pretest variables and degree of psychosocial development (difference scores on Total CBCL, Internalizing and Externalizing).

	M	SD	DIFF Internalizing r	DIFF externalizing r	DIFF total problems r
Age at admission (N = 121)	8.78	2.34	0.09	-0.02	0.05
Number of previous placements (N = 110)	1.49	1.63	-0.01	0.09	-0.01
Length of care history (mo.) (N = 63)	13.18	2.48	-0.03	0.12	0.08
Time between pre and posttest (N = 121)	13.08	1.91	0.11	0.07	0.09
Pretest internalizing problems (N = 121)	57.37	9.97	0.48***	0.14	0.32***
Pretest externalizing problems (N = 121)	58.55	11.79	0.17	0.44***	0.35***
Pretest total problems (N = 121)	59.27	10.43	0.26**	0.36***	0.42***

** $p < .01$; *** $p < .001$ (two-tailed Pearson correlation r).

Table 3
Progress in total psychosocial functioning, emotional, and behavioral development (CBCL) during a 1-year follow-up, arranged by setting (repeated measures ANOVA).

	Settings			**Effects**		
	FC (n = 30)	FGC (n = 14)	RC (n = 77)	Setting	Time	Setting x Time
	M (SD)	*M (SD)*	*M (SD)*	*F*	*F*	*F*
Total score CBCL				1.55	<1	2.87
Pretest T-score*	56.30(10.37)$_a$	64.79(13.34)$_a$	59.43(9.55)			
Posttest T-score	59.23(8.44)	61.50(15.14)	59.23(10.14)			
Internalizing CBCL				<1	<1	3.19*
Pretest T-score	55.57(9.01)	62.14(11.76)	57.21(9.84)			
Posttest T-score	58.03(8.01)	56.64(16.69)	57.99(9.68)			
Externalizing CBCL				<1	<1	1.55
Pretest T-score	54.67(11.85)	62.17(15.08)	59.31(10.83)			
Posttest T-score	57.30(10.46)	60.29(15.18)	60.08(10.70)			

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.
Note: Means with the same subscript differ significantly.
* $p < 0.05$

Psychosocial development during placement

Table 3 shows the results of the repeated measures ANOVA for the psychosocial development during placement. With regard to the total psychosocial functioning, no significant main effects were found on time and setting. The Setting x Time interaction showed an almost significant effect, $F(2, 118) = 2.87$, $p = .06$, $\eta^2_p = .05$. This indicates that the psychosocial development of the children was related to the setting in which the child was placed. Post hoc analyses demonstrated that children differed in the degree of functioning in the three main types of care at the time of admission, $F(2, 118) = 3.30$, $p = .04$, $\eta^2_p = .05$, in which foster children showed significantly fewer psychosocial problems than children in family-style group care ($p = .03$). Post hoc analyses also demonstrated a trend of psychosocial problems increasing within foster care, Wilks' Lambda = .97, $F(1, 118) = 3.65$, $p = .06$, $\eta^2_p = .03$. At the time of the posttest, these differences were no longer present.

There were no main effects on time and setting for emotional development. However, a significant interaction effect was found for Setting x Time, $F(2, 118) = 3.19$, $p = .04$, $\eta^2_p = .05$. Post hoc analyses showed that children in family-style group care developed more positively in the emotional domain than children in foster care or open residential care, Wilks' Lambda = .96, $F(1, 118) = 4.31$, $p = .04$, $\eta^2_p = .04$.

There were neither main effects nor interaction effects for behavioral development. This suggests that the behavioral functioning and the behavioral development for children in all three types of out-of-home care were comparable at every moment during the first year of placement. The finding further suggests that the behavioral functioning in all three settings remained unchanged during the investigated placement duration.

Table 4
Factorial ANOVA with setting (FC, FGC, RC) and pretest score (*clinical/non-clinical*) as independent variables and difference scores on Total CBCL, Internalizing and Externalizing as the dependent variable ($N = 121$).

	df	*SS*	*MSE*	*F*	*p*	η^2_p
Total score CBCL						
Setting	2	279.01	139.51	2.15	.12	.04
Pretest score	1	327.31	327.31	5.04	<u>.03</u>	.04
Setting x Pretest score	2	124.13	62.07	0.96	.39	.02
Residual	115	7472.64	64.98	---	---	---
Total	120	8742.98	---	---	---	---
Internalizing CBCL						
Setting	2	598.50	299.25	3.48	<u>.03</u>	.06
Pretest score	1	174.80	174.80	2.04	.16	.02
Setting x Pretest score	2	443.55	221.78	2.58	.08	.04
Residual	115	9877.29	85.89	---	---	---
Total	120	12216.15	---	---	---	---
Externalizing CBCL						
Setting	2	58.67	29.34	0.41	.66	.01
Pretest score	1	276.64	276.64	3.86	.05	.03
Setting x Pretest score	2	53.72	26.86	0.38	.69	.01
Residual	115	8231.66	71.58	---	---	---
Total	120	9267.17	---	---	---	---

Note: Underlined *p*-values are significant at $p < .05$.

Influence of psychosocial functioning at admission

Table 4 shows the results of the 3 x 2 (Setting x Severity at admission) factorial ANOVAs. As regards the total psychosocial development, there was a significant main effect of the severity of total problems at the time of admission on the degree of psychosocial development, $F(1, 120) = 5.04$, $p = .03$, $\eta^2_p = .04$. The mean T-score of the clinical group decreased by 2.5 (SD = 1.2) points, while the mean T-score of the non-clinical group increased by 1.9 (SD = 1.6) points. However, the mean posttest score of the non-clinical group was still within the normal range, $M = 53.42$, SD = 9.26. Furthermore, no significant main effect was found for setting ($p = .12$, $\eta^2_p = .04$), and there was no significant interaction effect ($p = .39$, $\eta^2_p = .02$).

With regard to the emotional problems, there was no significant main effect for the severity of emotional problems at the time of admission on the emotional development ($p = .16$, $\eta^2_p = .02$), and no significant interaction effect ($p = .08$, $\eta^2_p = .04$). Nevertheless, a significant main effect was found for setting, $F(2, 120) = 3.48$, $p = .03$, $\eta^2_p = .06$. Post hoc analyses showed that children in family-style group care had, on average, developed significantly more positively than foster children ($p = .03$) when no difference was made between the clinical and non-clinical group. The mean T-score of the children in family-style

group care reduced by 6.3 (SD = 2.7) points, while the mean T-score of foster children increased by 2.2 (SD = 1.7) points.

With reference to the behavioral development, there was an almost significant main effect for the severity of the behavioral problems at the time of admission, $F(1, 120) = 2.86$, $p = .05$, $\eta^2_p = .03$. The mean T-score of the clinical group on the externalizing problems scale reduced by 2.0 (SD = 1.3) points, while the mean T-score of the non-clinical group increased by 2.4 (SD = 1.8) points. There was no significant main effect for the factor setting ($p = .66$, $\eta^2_p = .01$), and also no significant interaction effect between both factors ($p = .69$, $\eta^2_p = .01$).

Individual development during placement

Table 5 shows the percentages of children who experienced a statistically significant change during placement in terms of developmental progress, no change and developmental deterioration. In the analysis, a distinction has been made between the clinical and non-clinical group. In addition, the results of children in family-style group care were excluded from the non-clinical group, because of the low number of children with non-clinical pretest scores.

Table 5

RCI by psychosocial problems at admission (*clinical/non-clinical*) with Fisher's exact test for association with setting.

	% Improvement	% No change	% Deterioration	Fisher's exact test with Cramers V
Clinical pretest score				
Total scale CBCL (n = 62)	35	50	15	$p = .89$, V = .10
Internalizing CBCL (n = 57)	35	47	18	$p = .51$, V = .16
Externalizing CBCL (n = 59)	39	27	34	$p = .71$, V = .14
Non-clinical pretest score[a]				
Total scale CBCL (n = 55)	15	40	45	$p = .57$, V = .17
Internalizing CBCL (n = 60)	22	32	47	$p = .26$, V = .22
Externalizing CBCL (n = 59)	20	17	63	$p = .47$, V = .16

[a] Family-style group care is excluded because of the low number of children with non-clinical pretest scores.

The table shows that 35-39% of the children in the clinical group had statistically significantly progressed in their psychosocial functioning, against 15-22% of the children in the non-clinical group. Additionally, 15-34% of children with clinical psychosocial problems at admission deteriorated any further, against 45-63% of children with no clinical problems at admission. When comparing developmental changes between the children in the three types of care, no statistically significant differences were found in type and degree of individual psychosocial development (Fisher's $p = .89$), emotional development (Fisher's $p = .51$), and behavioral development (Fisher's $p = .71$) for children with clinical pretest scores. For the non-clinical group no statistically significant differences were found between foster and residentially placed children in individual psychosocial development (Fisher's $p = .57$), emotional development (Fisher's $p = .26$), and behavioral development (Fisher's $p = .47$).

Developmental changes were considered to be clinically relevant when a statistically significant improvement is complemented by a normalization of the psychosocial functioning at the posttest. For the total psychosocial functioning, 11 of 62 (18%) children showed such a clinically relevant improvement. In addition, the emotional functioning of 14 of the 57 (25%) children normalized during placement. With regard to behavior problems, 11 of the 59 (19%) children showed a clinically relevant improvement. Due to the low numbers of children with a clinically relevant improvement, no comparison could be made between the three types of care.

Finally, individual children were classified as having a clinically significant deterioration in psychosocial functioning when this functioning is normal at the pretest but ends in the (sub)clinical domain at the posttest. This was the case in 11 of the 55 (20%) children with regard to the total psychosocial development. Furthermore, in 16 of the 60 (27%) children the emotional functioning shifted to the clinical domain during the first year after placement. With regard to the behavioral development, the posttest score of 16 of the 59 (27%) children shifted to the clinical domain. No comparison could be made between foster and residentially placed children because of the small number of children with a clinically significant deterioration.

DISCUSSION

Fundamental goal of all types of (24-hr) out-of-home care is to provide for the child's safety and to promote positive child development. To enlarge the knowledge of child development with regard to children in different types of out-of-home care, this study investigated similarities and differences in short-term psychosocial development of children placed out-of-home in foster care, family-style group care and residential care. Both analyses of changes at group level and changes at case level were explored. Moreover, the severity of the children's psychosocial problems at the time of admission was taken into account to obtain an adequate impression of the effectiveness of the considered care modalities, as suggested by Connor, Miller, Cunningham, and Melloni (2002); Wilson, Sinclair, Taylor, and Pithouse (2004).

Our findings did not confirm the first hypothesis that both family-oriented settings (i.e., foster care and family-style group care) will be more effective than open residential care, as proposed in the UN guidelines (United Nations, 2009, December 18) and suggested by literature data (e.g., Courtney, 1998; Harder et al., 2013). The psychosocial development between children in family-oriented settings and residential care were largely comparable at group level and individual level over a period of one year, according to substitute caregivers. Generally speaking, one third of the children experienced no developmental change, and one third respectively improved or deteriorated.

Even though the development in the three settings is broadly equal, some differences are noteworthy at a trend level. First of all, the average level of severity of psychosocial problems in foster children slightly increases during the first year of placement. This is in line with literature data (Lawrence, Carlson, & Egeland, 2006; Vanderfaeillie, Van Holen, Vanschoonlandt, Robberechts, & Stroobants, 2013). However, further analyses at case level showed that a decline in functioning mainly applies to foster children without clinical

psychosocial problems at the time of admission. Even though the mean psychosocial functioning of foster children still fell within the normal range at posttest, the trend of increasing psychosocial problems might persist long term [as mentioned in the study by Lawrence et al. (2006)], which can ultimately increase the risk of a breakdown (Strijker et al., 2008; Van den Bergh & Weterings, 2010; Vanschoonlandt, Vanderfaeillie, Van Holen, & De Maeyer, 2012).

Second, our findings indicated that children in family-style group care seem to have a more positive emotional development than foster or residentially placed children. Unfortunately, the data from our study could not provide a clear explanation for this, due to the relatively small number of children in family-style group care.

Finally, specifically with reference to care history, it is worth noting that preliminary analyses in this study did not confirm that a less favorable psychosocial development can be linked to unfavorable care history characteristics (i.e., number of placements, length of care history). A possible explanation for not finding a significant association between care history and psychosocial development might be that other factors such as the quality of care or the responsivity of the child (e.g., learnability) have mitigated the association. However, this should be explored in future research.

Our second hypothesis was that children with severe psychosocial problems at admission would develop less favorably than children without significant psychosocial problems. However, our data indicated the opposite. Results both at group and individual level demonstrated that children with clinical psychosocial problems at admission experienced a more positive development than children in the non-clinical group. Even though the psychosocial functioning of the children in the clinical group still fell, on average, within the clinical or subclinical range at time of the posttest; at individual level about one in five children (18%) had a clinically relevant improvement in global psychosocial functioning. This percentage falls within the range of earlier reported percentages of improvement (varying from 0 to 29%) for out-of-home placed children (Boyer, Hallion, Hammell, & Button, 2009; Vanderfaeillie et al., 2013). By contrast, one in five (20%) children in the non-clinical group experienced a clinically relevant deterioration in psychosocial functioning at individual level, although the results on group level fell (on average) still within the normal range at time of the posttest. This percentage of deterioration is also more or less consistent with literature data reporting percentages varying from 17 to 25% (Boyer et al., 2009; Vanderfaeillie et al., 2013).

Supplementary to the second hypothesis, we expected that children with clinical psychosocial problems would develop less favorably in foster care specifically, based on literature data showing that placement breakdowns (one-third) in foster care are mainly caused by the level of psychosocial problems at admission (Van den Bergh & Weterings, 2010; Vanschoonlandt et al., 2012). However, in all three types of care the clinical group experienced a comparable positive development. This finding might indicate that the provided out-of-home care was attuned to the specific needs of the children and their responsiveness for the specific type of out-of-home care. On the other hand, an alternative explanation may be that regression to the mean has occurred, which is a common phenomenon in repeated measurements between groups (Barnett, van der Pols, & Dobson, 2005). Further experimental research is needed to clarify this.

Furthermore, with reference to the differences in development between the clinical and non-clinical groups the following two key issues are noteworthy. First, it is remarkable that a part of the out-of-home placed children did not have clinical psychosocial problems at the time of admission. Probably this especially concerns children who are placed out-of-home due to severe family circumstances (e.g., neglect, parental mental illness, incarceration). However, an out-of-home placement itself can be just as traumatic and can lead to behavioral problems (Bruskas, 2008; Schneider & Phares, 2005). This might explain the finding that particularly this specific group deteriorated with regard to psychosocial functioning during the first year of placement. More research is needed to examine this suggestion. Nevertheless, it raises the question of whether intensive in-home services would have been a better alternative for these children in order to prevent them from the risk of being traumatized by the out-of-home placement. The second issue involves the finding that the baseline level of psychosocial problems of residentially placed children was not (statistically) significantly higher compared to children in the family-oriented settings. This finding is contradictory to literature data that suggest that children with a high level of psychosocial problems are often assigned to residential care, among other things, to meet their high treatment needs (Butler & McPherson, 2007; De Swart et al., 2012; Doran & Berliner, 2001). The finding can possibly be attributed to the specificity of the study population which only consisted of Dutch out-of-home placed children. In the Netherlands, nowadays family-style group care is often assigned to children who need a long-term placement in a family-oriented setting at the end of a long care history, indicating that family-style group care instead of residential care seems to be used as treatment of “last resort” (Leloux-Opmeer et al., 2017a).

Strengths and limitations

The strengths of this study include first the comparison of the psychosocial development of children placed in the three types of out-of-home care investigated. We found no other studies that conduct such a triple comparison. Second, this study contributes to the knowledge on out-of-home placement, particularly because we have taken into account the severity of the psychosocial problems present at the time of admission, which provided a more accurate impression of the children’s psychosocial development. Finally, we conducted analyses at group level as well as at individual level, which turned out to be a valuable addition.

However, the study also has some limitations. First, some of the analyses could have suffered from limited statistical power, due to the relatively small sample size of children in family-style group care. This can hamper the ability to find statistically significant associations, so the results should be interpreted with some caution. However, to provide insight into the relevance of the relationships explored in the study, we have added effect sizes for all the statistical findings, which also provides an impression of the power of the study (Cohen, 1992). Second, we cannot rule out that regression to the mean partly determined the study results. Random allocation of subjects to treatment conditions is considered to be a valid strategy to resolve this issue (Barnett et al., 2005). However, for ethical reasons, random allocation of children to each of the three types of out-of-home care was no option in this study. Third, it should be noticed that other variables (e.g., quality of care, the child’s learnability, causes of psychosocial problems) might have affected the

outcome variables. However, the aim of this study was to assess and mutually compare the psychosocial development of children during the first year after admission to the three care modalities concerned, taking into account possible differences in the severity of the children's psychosocial problems at the time of admission. Further research is needed to investigate the influences that child, family, care history and specific treatment variables at the micro level have on the psychosocial development of children in 24-hr care facilities. Finally, it is conceivable that other outcome measures than the degree of psychosocial functioning are important in the comparison of the development of children in the three types of out-of-home care.

5

DISCRIMINATING BASELINE INDICATORS FOR (UN)FAVORABLE PSYCHOSOCIAL DEVELOPMENT IN DIFFERENT 24-H SETTINGS

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Children and Youth Services Review (2018), 89, 113-123

ABSTRACT

The study consisted of a cross-sectional cohort study which explored the association between baseline child, family, and care characteristics and the psychosocial development of 121 school-aged Dutch children (M age = 8.78 years; SD = 2.34 years; 47% female; 59% Caucasian) during their first year of placement in foster care (FC), family-style group care (FGC), and residential care (RC). Potential baseline characteristics were collected from both literature data and the cross-sectional part of the study, and measured with standardized questionnaires and case file information. The outcome measure (degree of psychosocial development) was based on pretest and posttest ASEBA measurements of substitute caregivers, by calculating the reliable change index (RCI). Based on this, 58% of the children had favorable psychosocial development, with no significant differences across the settings. Results indicated that sets of baseline characteristics were able to distinguish different groups of favorably developing children as well as unfavorably developing children in different settings, whereby unfavorable development could be estimated more accurately. A history of maltreatment proved to be an important risk factor, particularly for family-based settings (FC, FGC). Furthermore, results indicated that specialized treatment is needed for severe individual problems in children in family-style group care, as these problems were associated with unfavorable psychosocial development for them in particular. With regard to residentially placed children, child mental illness specifically negatively affected their prognosis. Further research is needed to refine the results in order to make them suitable for both supporting decision-making processes and monitoring out-of-home placements.

INTRODUCTION

Every child has the fundamental right to grow up in a supportive, caring, and safe environment with optimal developmental opportunities (United Nations, 1989). Ideally, this place is within the family of origin. At times, however, risky circumstances such as development-threatening child characteristics or adverse family circumstances (temporarily) preclude biological parents from offering children a healthy upbringing. When outpatient support insufficiently improves existing child and family risks and needs, out-of-home care may be an alternative strategy (Bhatti-Sinclair & Sutcliffe, 2012; Pinto & Maia, 2013; Vanschoonlandt, Vanderfaeillie, Van Holen, De Maeyer, & Robberechts, 2013). This (24-h) out-of-home care consists of a continuum of services which vary from least restrictive care services (e.g., foster care) to family-based settings with paid caregivers (e.g., family-style group care) to several types of residential treatment care (Huefner, James, Ringle, Thompson, & Daly, 2010; Washington State Department of Social and Health Services: Children's Administration, 2014). According to the United Nations Guidelines for the Alternative Care of Children (2009, December 18), foster care and other family-based settings are preferred. Alternatively, the UN guidelines state that in cases of severe risks and needs, more restrictive types of care such as residential treatment may be required (United Nations, 2009, December 18, p. 5).

Three main types of out-of-home care can be distinguished; foster care (FC), family-style group care (FGC), and residential care (RC). In the case of foster care, the child is placed in an alternative family (kinship or non-kinship), consisting of one or two volunteering foster parents who take care of the child for a short- or long-term period. In contrast to the foster care process in the United States, in several European countries including the Netherlands, it is extremely uncommon for foster parents to adopt a foster child when reunification with the biological parent(s) is not an option (Holtan, Handegård, Thørnblad, & Vis, 2013). Instead, in such cases the child remains in long-term foster care until the age of 18 (Strijker, Knorth, & Knot-Dickscheit, 2008). Family-style group care consists of placement in a family with one or two pedagogically trained group parents who provide daily professional supervision of six to eight placed children (Ringle, Ingram, & Thompson, 2010; Whittaker et al., 2015). Several synonyms are used for this type of care, such as teaching family homes, SOS children’s villages, and socio-pedagogical homes (Harder, Zeller, Lopez, Köngeter, & Knorth, 2013; Whittaker et al., 2015). Residential care consists of multiple forms of 24-h care, varying from less restrictive and less intensive open residential treatment, to restrictive secure residential treatment, to intensive and highly restrictive inpatient psychiatric care (Barth, 2002; Whittaker et al., 2015). Most characteristic of this type of care is both the supervision by 24-h shift staff, and the arsenal of therapeutic components available (Berrick, Courtney, & Barth, 1993; Butler & McPherson, 2007).

Whatever the circumstances from which the child has come and whatever type of care is chosen, the out-of-home placement alone can be a traumatic experience, due to the loss of the parents, siblings, peers, and school environment (Bruskas, 2008; Schneider & Phares, 2005). Moreover, once placed in the service system, the child is at high risk of re-placement, since placement instability is a common phenomenon across all types of out-of-home care (Barber & Delfabbro, 2002; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007; Ward, 2009). When a child experiences a placement disruption, this usually affects the child’s development

negatively and may cause additional behavioral and emotional problems (Oosterman et al., 2007; Ward, 2009). For this reason, it is in the best interests of the child to be referred to the most suitable type of care from the beginning, or to address the identified risk factors directly after placement, thereby aiming to prevent such disruptions.

Decision making is, however, often based on incomplete and ambiguous information (Lausten, 2015). It would be helpful, therefore, to have a set of baseline indicators that is related to either a successful or unsuccessful out-of-home placement in a particular 24-h setting. An important question is whether the particular risks and needs in the child, family, and care (history) context at the time of the admission to out-of-home-care could serve this purpose. If so, such a set of baseline characteristics could greatly enhance the quality of the decision making concerning referral to a specific type of out-of-home care, or this set could be used to preventively intervene right from the start (Leloux-Opmeer et al., 2017a; Strijker, Zandberg, & Van der Meulen, 2002).

Comparative research has already demonstrated that the baseline risks and needs in child, family, and care context differ between children in the three main types of out-of-home care (Allen & Vacca, 2011; Leloux-Opmeer et al., 2016; De Swart et al., 2012; James, Roesch, & Zhang, 2012; Smyke et al., 2012). Nevertheless, only a few studies were found that examined the association between a combination of baseline characteristics, that is “baseline profiles”, and placement outcomes (Xue, Hodges, & Wotring, 2004; Yampolskaya, Sharrock, Armstrong, Strozier, & Swanke, 2014). In addition, no studies were found which simultaneously compared these baseline profiles with respect to positive or negative placement outcomes across different out-of-home care settings. Such studies are, however, necessary in order to understand the impact of a placement on the child’s development, for each separate 24-h setting (McCrae, Lee, Barth, & Rauktis, 2010). In addition, knowledge of the interaction between risk factors and their effect on placement outcome is of substantial importance, because it contributes to the development of interventions addressing co-occurring problems simultaneously (Yampolskaya et al., 2014; Zuravin & DePanfilis, 1997). Therefore, the aim of this study was to explore which set of specific baseline characteristics (positively or negatively) affects psychosocial child development during placement within each main setting of out-of-home care. To this end, we first examined which combination of baseline child, family, and care characteristics could discriminate between children who experienced positive or "favorable" psychosocial development during the first year of placement in either foster care, family-style group care, or residential care. Second, we explored which combination of baseline characteristics could distinguish between children who experienced negative or “unfavorable” psychosocial development during the first year of placement in the three aforementioned types of out-of-home care.

Accordingly, the following research questions were posed: (1a) which child, family, and care characteristics at the time of admission univariately differ between favorably developing children in foster, family-style group, and residential care; (1b) which child, family and care characteristics at the time of admission univariately differ between unfavorably developing children in foster, family-style group, and residential care; (2a) which combination of baseline characteristics discriminate between favorably developing children in foster, family-style group, and residential care; and (2b) which combination of baseline characteristics discriminate between unfavorably developing children in the three types of care concerned.

To systemize and summarize the research findings, a modification of the developmental model of Kerig, Ludlow, and Wenar (2012) was used (for details, see Leloux-Opmeer et al., 2016). In line with this model, the (potential) discriminating characteristics are categorized into three categories: (a) (biological) individual context, (b) family context (i.e., biological or substitute), and (c) care history context.

First, we hypothesized that a positive pedagogical relationship (in terms of low levels of dependency and conflicts) between the child and substitute caregiver (i.e., foster parents, family-style group parents, group care workers) shortly after admission in all three 24-h settings equally positively relates to psychosocial development (e.g., Bakermans-Kranenburg et al., 2011; Van den Bergh & Weterings, 2010; Whenan, Oxlad, & Lushington, 2009). Second, we hypothesized that the number of former placements would be an important indicator for discriminating, in particular, between unfavorably developing foster children and those in residential care. This is because of the tendency to view residential care as a treatment of “last resort” (Huefner et al., 2010; Whittaker et al., 2015), often resulting in a long care history for the latter. Third, we assumed that a history of child maltreatment negatively affects psychosocial development (e.g., Spinhoven et al., 2010; Yampolskaya et al., 2014). Specifically, we expected this characteristic to discriminate unfavorably developing children in family-based settings (i.e., foster and family-style group care) from those in residential care, due to the prevalence of a history of maltreatment in family-based settings (Leloux-Opmeer et al., 2016; Bernedo, Salas, Fuentes, & García-Martín, 2014). Fourth, we expected that the level of psychosocial problems at the time of admission is negatively related to psychosocial development during placement, and specifically distinguishes unfavorably developing foster children from those in the other two settings (e.g., Aarons et al., 2010; Vanschoonlandt et al., 2013). Finally, we hypothesized that a high level of social-emotional detachment at the time of admission contributes to the distinction of unfavorably developing residentially placed children from unfavorably developing children in foster and family-style group care, as children with these problems are less likely to be placed in a family-based setting (Lee, 2010), and their developmental prognoses are poor (e.g., Kay & Green, 2013; O'Connor, 2003).

METHODS

Design and study population

A cross-sectional cohort study was used consisting of a pretest and a posttest among substitute caregivers of Dutch primary-school children (aged 4-12) placed in foster care (kinship or non-kinship), family-style group care, and open residential care. The data collection took place between October 2012, and April 2015. Initially, substitute caregivers were recruited from Horizon; a large organization for specialized care and educational services for children with complex behavioral problems, usually originating from multi-problem families in (sub)urban areas. The subgroup family-style group care was supplemented by two thirds with children from independent entrepreneurs who run a family-style group home and are affiliated with other comparable Dutch youth care organizations. Additionally, this subgroup was partly supplemented by a retrospective record analysis (14%) of children who were placed in a Horizon family-style group home in 2011 or in the first nine months of 2012. No distinction was made between kinship and non-kinship foster care

because of the controversial evidence regarding whether one performs better than the other (Holtan et al., 2013; Holtan, Rønning, Handegård, & Sourander, 2005; Oosterman et al., 2007; Wilson, Sinclair, Taylor, & Pithouse, 2004). All children received treatment as usual.

Participants

In total, 215 cases were examined for eligibility for the pretest, of which 40 guardians actively or passively declined participation. Of the 175 remaining cases, 17 substitute caregivers actively or passively declined participation. In sum, for 158 cases at least a CBCL pretest was available. With regard to the posttest, 17 cases did not meet the inclusion criteria, mostly due to premature termination of the placement (n = 11). In total, for 86% (n = 121) of the 141 cases examined for eligibility for the posttest, at least a CBCL posttest had been completed (foster parents 73%, family-style group parents 74%, group care workers 95%). The response rate was considered sufficient compared to the median participation rate in cohort studies (80%) (Morton, Cahill, & Hartge, 2006). To examine the representativeness of the response group, the most important baseline characteristics between the response group (n = 121) and the group participants excluded for the posttest (n = 37) were compared. No significant differences were found between both groups as regards gender, ethnicity, CPS custody, and socio-economic status (using Fisher's exact tests). Furthermore, no differences were found in the mean age of admission, the mean number of (re)placements, the level of behavioral problems at admission, and the level of social-emotional detachment at admission (using two-tailed independent Student t-tests).

The total group of participants included 30 foster children, 14 children in family-style group care, and 77 residentially placed children. At the time of the posttest, 22% of all participating children had been discharged. As regards foster care, one third of the participating foster families were a kinship family, housing on average 3.6 (SD = 1.3) children, including 1.9 (SD = 1.3) biological children. Seventeen percent of the foster children received therapy or medication supplementary to the placement. Additionally, 13% attended special education. The participating family-style group parents accommodated on average 6.0 (SD = 2.0) children, including 1.4 (SD = 1.3) biological children. One third of the children received therapy or medication, and 70% received special education. The participating residentially placed children lived in structured living groups, housing 8-10 children, with daily supervision by group care workers. Next to regular group therapy, 48% received individual therapy or medication, and all children went to an incorporated school for special needs education.

Table 1 displays the demographic characteristics for each subgroup. The children in the three types of care differed in mean age at admission, $F(2, 118) = 6.97$, $p < .01$, Cohen's f = .34, in which foster children were younger compared to children in family-style group and residential care. The three types of care also differed in the distribution of gender, $\chi^2(2, N = 121) = 6.47$, $p < .05$, Cramer's V = .23, in which family-style group care consisted of more girls. Finally, the mean time between pre- and posttest differed between the three types of care, with a (statistically) large effect, $F(2, 118) = 15.05$, $p < .001$, Cohen's $f = .51$. However, all posttests were conducted between 12.7 months and 15.4 months after the pretest. This small difference in months was not considered clinically significant because additional

analyses did not show an association between the time between the pre- and posttest, and the outcome in terms of successful or unsuccessful placement, $F(1, 119) = 1.86$, $p < .05$.

Table 1
Demographic characteristics at baseline for children in foster care, family-style group care and residential care ($N_{max} = 121$).

	FC ($n_{max} = 30$)	FGC ($n_{max} = 14$)	RC ($n_{max} = 77$)	Test	Effect size
Gender (% male)	43	29_a	61_a	$\chi^2(2, N = 121) = 6.47^+$	.23
Race (% Caucasian)	63	67	56	$\chi^2(2, N = 93) = 0.72^{ns}$	.09
Child protective services (%)	90	83	73	$\chi^2(2, N = 115) = 3.99^{ns}$	.19
SES (% low)	50	50	62	$\chi^2(2, N = 25) = 0.34^{ns}$	.12
Mean age at admission (yrs)	$M = 7.5$, SD = $2.5_{a,b}$	$M = 9.7$, SD = 2.1_a	$M = 9.1$, SD = 2.1_b	$F(2, 118) = 6.97$**	.34
Mean number of previous placements	$M = 1.0$, SD = 1.1	$M = 2.0$, SD = 1.1	$M = 1.6$, SD = 1.8	$F(2, 107) = 1.95^{ns}$	.19
Time between pre and posttest (mo.)	$M = 13.0$, SD = 1.7_a	$M = 15.4$ SD = $2.2_{a,b}$	$M = 12.7$, SD = 1.6_b	$F(2, 118) = 15.05$***	.51

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.
Note: Means with the same subscript differ significantly.
$^+p < .05$ (Chi-square test with effect size Cramer's V).
** $p < .01$, *** $p < .001$ (Anova with effect size Cohen's f).

Procedures

Data collection procedure

The cohort study was not subject to the Medical Research Involving Human Subjects Act (WMO) and was, therefore, not put before a medical ethics review committee. The research protocol complied with the Netherlands Code of Conduct for Academic Practice (Association of Universities in the Netherlands, 2014): (1) written permission was obtained from the guardians, (2) all participants could withdraw from the study without explanation, and (3) distorted case file numbers were used to guarantee anonymity.

Pretests were conducted on cases in which: (1) the child was of primary school age (4-12 years), (2) the child was being placed out of either their birth home or another setting, and (3) participation would not harm the treatment alliance with the biological parents. The exclusion criteria involved: (1) adopted children or children with intellectual disabilities (IQ < 70), and (2) a crisis placement or a placement in a secure residential youth care facility. Posttests were conducted a year after placement and on occasion earlier than this (in case of earlier termination), when (1) at least a CBCL pretest of the substitute caregiver was available against which the posttest could be compared to create the outcome variable, and (2) there was a minimum of three months between the pretest and posttest. A blind outcome assessment was performed because the participants were not informed about how the outcome measure was designed.

Procedure for designing the outcome measure

The degree of psychosocial development between the pre- and posttest was used as an outcome measure. To distinguish between favorable and unfavorable development, a new outcome variable was produced by calculating the Reliable Change Index (RCI) for the total behavior scores (T0-T1) on the Achenbach System of Empirically Based Assessment (ASEBA). An RCI greater than 1.96 reflected statistically significant progress, corresponding to the significance value of $p < .05$ (Jacobson & Truax, 1991). Similarly, an RCI smaller than -1.96 reflected statistically significant deterioration. Furthermore, a shift from the (sub)clinical range to the normal range reflected clinically significant progress, while the opposite reflected a clinically significant deterioration.

Favorable psychosocial development was defined as: (1) children with a pretest score in the (sub)clinical range who made statistically significant or statistically and clinically significant progress by the time of the posttest, and (2) children with both a pretest and a posttest score in the normal domain regardless of their statistical change. Unfavorable psychosocial development was defined as (1) children with a pretest in the (sub)clinical domain who made no statistically significant progress, and (2) children with a pretest in the normal domain and a posttest in the (sub)clinical domain.

Procedure for assembling a set of potential discriminating baseline characteristics

The set of potential discriminating characteristics between the three groups of favorably or unfavorably developing children were determined as follows. First, literature reviews on differences in children's characteristics and outcomes in foster, family-style group, and residential care were used (Leloux-Opmeer et al., 2016; De Swart et al., 2012; Knorth, Harder, Zandberg, & Kendrick, 2008; Oosterman et al., 2007; Strijbosch et al., 2015). This initially resulted in 10 baseline characteristics. Another three baseline characteristics were added to the set, based on the results of the cross-sectional study conducted prior to this study (Leloux-Opmeer et al., 2017a). Table 2 provides an overview of the total set of potential discriminating characteristics and the way they were measured. A description of the measures used is presented below (2.3).

Measures

Both case file information and questionnaires for the children's substitute caregivers (i.e., foster parents, family-style group parents, and childcare workers) were used. Children were not active participants in the study. A blind assessment of predictors was performed because the results were calculated prior to and separately from the outcome measure in a standardized way.

Case file characteristics questionnaire (CCQ)

A case file questionnaire was designed to chart file information systematically on demographic characteristics (e.g., age, gender), clinical characteristics (e.g., psychosocial problems, school-related problems, child mental illness), family characteristics (e.g., family composition, clinical family problems), and care history characteristics (e.g., previous placements, child protective services) on admission. This 30-item questionnaire was

completed by or under the supervision of a behavioral scientist. Most items of the CCQ were related to factual information and all were categorized, and, if possible, dichotomized (*yes/no*). For potentially ambiguous items which required some interpretation, a scoring protocol was available. The inter-observer reliability of the questionnaire was used to measure the intraclass correlation (ICC) of the CCQ (Cohen, 1992). Five files were scored with the CCQ by two raters. Based on the guidelines by Landers (2015), a two-way mixed model was used with absolute agreement as a criterion. The mean ICC (95% CI) was 0.66 (0.58, 0.72), which reflects a moderate inter-observer reliability (Shrout, 1998).

<u>Child behavior checklist CBCL/1.5-5 and CBCL/4-18</u>

The Dutch versions of these checklists were completed by the substitute caregivers at the time of the pretest and posttest to determine the level of psychosocial development of the out-of-home placed children (Achenbach & Rescorla, 2001; Verhulst, Van der Ende, & Hoolhans, 1996). The CBCL/1.5-5 and CBCL/4-18 ask informants to use a three-point scale (where 0 = *not true*, 1 = *sometimes true*, and 2 = *very true*) to respectively assess 99 and 120 items relating to behavioral and emotional problems. The summary scale T scores of total psychosocial problems from both instruments were used in this study. Achenbach and Rescorla (2001) suggest using T scores of 60 or above to discriminate between children with and without (borderline) psychosocial problems. The psychometric characteristics of the CBCL are regarded as satisfactory (Achenbach & Rescorla, 2001), as are the Dutch versions of the CBCL (Verhulst & Van der Ende, 2013).

<u>Social emotional detachment questionnaire (SEDQ).</u>

The Dutch version of the SEDQ (Scholte & Van der Ploeg, 2007) was used to obtain signs of social and emotional detachment (such as egocentric and callous-unemotional traits) in children aged 4 to 18 years. The questionnaire is comprised of 16 items that can be scored using a five-point scale (where 0 = *never true*, 1 = *sometimes true*, 2 = *regularly true*, 3 = *often true*, and 4 = *very often true*). This study utilized the total scale score of this questionnaire. Scores within or above the 95th percentile reflect evident social and emotional detachment. The SEDQ meets the psychometric standards required for research purposes (Scholte & Van der Ploeg, 2007). The internal consistency of the total scale measured with Cronbach's alpha is .92. The test-retest reliability (*r*) for this scale is 0.85 (Scholte & Van der Ploeg, 2007).

<u>The student-teacher relationship scale (STRS).</u>

The Dutch version of the STRS was used to assess each substitute caregiver's perception of his or her pedagogical relationship with the out-of-home placed child. The questionnaire is based on the presumption that a child's mental representation of attachment patterns is reflected in his or her relationship with significant adults (Koomen, Verschuren, & Pianta, 2007; Pianta & Nimetz, 1991). The STRS, which is applicable for children aged 3 to 12 years, consists of 28 items that are measured on a five-point scale (where 1 = *definitely not true*, 2 = *not really true*, 3 = *neutral/not sure*, 4 = *somewhat true*, and 5 = *definitely true*). This instrument provides three subscales (namely proximity, conflict, dependency) and a total

scale score that reflects the general quality of the pedagogical relationship. Scores at or above the 90th percentile (specifically for the subscales conflict and dependency) and scores at or below the 10th percentile (specifically for the subscale proximity and the total scale) all fall within the clinical range. The STRS meets the psychometric standards required for research purposes (Koomen et al., 2007). The internal consistency of the total scale measured with Cronbach's alpha is .89, and the test-retest reliability (*r*) is .70 (Koomen et al., 2007).

Table 2
Description of definition and source of the 13 potential discriminating characteristics identified.

Variable	Definition	Source[a]
Individual context		
Gender	Gender of the child; *0 female/1 male*	CCQ
Age at admission	Age in years at the time of admission	CCQ
Psychosocial problems	Pretest T-score on total problem scale; *T>60 (sub)clinical*	CBCL
School related problems	Casefile record on learning performance/disadvantage, conflicts with classmates/teachers, truancy; *0 absent/1present*	CCQ
Social-emotional detachment	Pretest T-score on social-emotional detachment scale; *T>60 (sub)clinical*	SEDQ
Child mental illness*	Casefile record on psychiatric disorder other than attachment related problems (i.e., ODD, ASD, CD, ADHD); *0 absent/1 present*	CCQ
Family context		
Child maltreatment	Casefile record on sexual/physical/emotional abuse, and physical/emotional neglect in the family of origin; *0 absent/1 present*	CCQ
Parental mental illness	Casefile record on mental problems in one or both biological parents; *0 absent/1 present*	CCQ
Material problems/ poverty	Casefile record on financial problems, unemployment, or housing problems in the family of origin; *0 absent/1 present*	CCQ
Conflicts with substitute caregiver(s)*	Pretest T-score on Conflicts scale; *T>60 (sub)clinical*	STRS
Dependency towards substitute caregiver*	Pretest T-score on Dependency scale; *T>60 (sub)clinical*	STRS
Care history context		
Number of former placements	Number of previous out-of-home placements exclusive current placement, reported in casefile	CCQ
CPS custody	Casefile record that child is in child protective service (CPS) custody; *0 absent/1 present*	CCQ

*Variable derived from results cross-sectional study.
[a]*CCQ* case file characteristics questionnaire, *CBCL* child behavior checklist, *SEDQ* Social emotional detachment questionnaire, *STRS* Student-teacher relationship scale.

Data analyses

The SPSS 23 (Statistical Package for Social Sciences) was used for the data analyses. An assessment of test assumptions was conducted before the analyses, and data were screened for outliers and missing values. Outliers were tested by calculating standardized z-scores. Responses with a z-score greater than 3.29 ($p < .001$, two-tailed test) were regarded as outliers (Cohen, 1992). We managed outliers by taking the next highest score plus one unit (Cohen, 1992). The randomness of missing values was examined. To specifically increase the statistical power of the multivariate part of the study, missing values were handled by single imputation using the (within groups) series mean estimation method (Cohen, Cohen, West, & Aiken, 2003). Variables with more than 10% missing were excluded from the analyses (Moons, Donders, Stijnen, & Harrell, 2006). Dichotomous predictor variables (used as metric values in the discriminant analyses) were checked for very uneven splits between categories (ratio 90:10 or more). To assess the clinical significance of the scores on all of the test instruments equally, raw scores were converted to T-scores (which are standardized scores with a mean of 50 and a standard deviation of 10) (Field, 2009).

To answer the first set of research questions (1a and 1b) on the univariate differences, Fisher's exact test with effect size using Cramer's V (for categorical variables) and Anova with effect size using Cohen's *f* (for continuous variables) were employed within both outcome groups. Results with p-values less than .05 (two-tailed tests) were interpreted as statistically significant. An effect size of .10 (Cohen's *f* and Cramer's V) represented a small effect; a value of .25 (Cohen's *f*) and .30 (Cramer's V) represented a medium-sized effect; and a value equal to or greater than .40 (Cohen's *f*) and .50 (Cramer's V) represented a large effect (Cohen, 1992).

To answer the second set of research questions (2a and 2b) on the multivariate discrimination between groups, two separate stepwise (linear) discriminant analyses were conducted; one for the favorably developing children and one for the unfavorably developing children. The type of care (foster, family-style group, and residential care) was used as the independent grouping variable (the criterion), and the baseline characteristics that univariately significantly discriminate between the three groups were used as the independent (predictor) variables. Stepwise criteria involved the use of probability of F to enter at $p < .05$ and to remove at $p < .10$. Variables that substantially ($r > 0.3$) correlated with the discriminating functions were used to determine the distinguishing characteristics between the three groups. R^2 and the percentage of children correctly classified were used to determine the distinctive power of the discriminating function. Prior probabilities of classification were used in this analysis taking into account each group size.

RESULTS

Descriptive analyses

Preliminary analyses showed no uneven splits for dichotomous predictor variables. For continuous predictor variables, no outliers were found in both groups of favorably and unfavorably developing children. Additionally, based on skewness and kurtosis values, all continuous variables were normally distributed except for the variable "number of placements." For this variable, the kurtosis value was 5.8 suggesting low variability. Missing value analyses showed missing values were missing at random (MAR). The variable "school

related problems" appeared to have more than 10% of missing data, and was omitted from the study. Hence, the final set of initial baseline variables consisted of 12 variables.

Based on the designed outcome measure, 58% of the children in care were classified as favorably developing children (see Table 3). No differences were found between the percentages of favorably developing children in the three types of out-of-home care, $\chi^2(2, N = 121) = 1.44$, p = n.s.

Table 3
Number (%) of children with favorable and unfavorable (short term) development in foster, family-style group, and residential care.

	Favorable development *n* (%)	Unfavorable development *n* (%)
Foster care ($n = 30$)	20 (67)	10 (33)
Family-style group care ($n = 14$)	7 (50)	7 (50)
Residential care ($n = 77$)	43 (56)	34 (44)
Total ($N = 121$)	70 (58)	51 (42)

Univariate distinctive baseline characteristics of the favorably and unfavorably developing children in FC, FGC, and RC

Distinctive baseline characteristics of favorably developing children

With reference to the first part of the first research question (1a), Table 4 indicates which of the 12 defined baseline characteristics discriminated univariately between favorably developing children in foster care, family-style group care, and residential care. Three of these characteristics were found to be different across the three types of care. First, in family-style group care, no single male developed favorably, in contrast to 40% of males in foster care and 56% of males in residential care (Fisher's $p = .01$, V = .34). Second, favorably developing children in foster care were significantly younger at the time of admission compared to children in family-style group and residential care, $F(2, 67) = 6.38$, $p < .01$, $f = .44$. Finally, favorably developing foster children more often exhibited signs of negative dependency towards the substitute caregiver shortly after admission than residentially placed children, $F(2, 63) = 3.93$, $p < .05$, $f = .35$.

Table 4
Significance levels and effect sizes of differences in baseline characteristics between the three groups of psychosocially favorably developing children ($N_{max} = 70$).

	FC ($n_{max} = 20$)	FGC ($n_{max} = 7$)	RC ($n_{max} = 43$)	Test	Effect size
	M (SD)	*M (SD)*	*M (SD)*		
Individual context					
Gender (% male)	40	0	56	Fisher's $p = .01^{+}$	.34
Mean age at admission (yrs.)	$7.0(2.6)_{a,b}$	$9.6(2.7)_{a}$	$9.1(2.0)_{b}$	$F(2, 67) = 6.38^{**}$	.44
Psychosocial problems (T-score)	53(10)	57(16)	56(10)	$F(2, 67) = 0.45^{ns}$	.12
Detachment (T-score)	61(16)	60(9)	60(14)	$F(2, 60) = 0.00^{ns}$	.01
Child mental illness (%)	37	60	53	Fisher's $p = .53$	.16
Family context					
Child maltreatment (%)	55	80	63	Fisher's $p = .62$	.13
Parental mental illness (%)	85	80	63	Fisher's $p = .16$	.23
Material problems/poverty (%)	65	80	55	Fisher's $p = .58$	.15
Conflicts (T-score)	61(13)	54(10)	56(13)	$F(2, 63) = 1.12^{ns}$	.19
Dependency (T-score)	$62(9)_{a}$	56(15)	$53(12)_{a}$	$F(2, 63) = 3.93^{*}$	.35
Care history context					
Mean number of placements	1.0(1.2)	1.8(1.5)	1.9(2.1)	$F(2, 59) = 1.39^{ns}$	.22
CPS custody (%)	90	100	83	Fisher's $p = .63$	.15

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.
Note: Means with the same subscript differ significantly (Bonferroni's test).
$^{+}p < .05$ (Fisher's exact test with Cramer's V).
$^{*} p < .05$ $^{**} p < .01$ (ANOVA with Cohen's *f*).

Distinctive baseline characteristics of unfavorably developing children

The second part of the first hypothesis (1b) concerned differences in baseline characteristics between unfavorably developing children in the three types of out-of-home care. Table 5 shows the results of the comparisons. First of all, the level of baseline psychosocial problems discriminated statistically significantly between the three groups of unfavorably developing children, $F(2, 48) = 5.95$, $p < .01$, $f = .50$, in which children in family-style group care demonstrated the highest level of psychosocial problems at the pretest. Furthermore, the level of social-emotional detachment in unfavorably developing children in family-style group care was dissimilar to such children in residential care, to the disadvantage of children in family-style group care $F(2, 44) = 5.02$, $p < .05$, $f = .48$. Third, the number of children with mental illness differed across the three subgroups of unfavorably developing children with a large effect, Fisher's $p = .00$, V = .54. Child mental illness in unfavorably developing children occurred more frequently in residential care (81%), compared to foster care (33%), and family-style group care (17%). Fourth, a large difference was found in the number of children with a history of (a form of) maltreatment in the family of origin, Fisher's $p = .00$, V = .59. Unfavorably developing residentially placed children had

clearly experienced maltreatment less often (21%), compared to unfavorably developing foster children (90%) and children in family-style group care (67%). Finally, the level of conflict with the substitute caregiver shortly after admission was dissimilar between the three subgroups of unfavorably developing children, $F(2, 47) = 3.53$, $p < .05$, $f = .39$. Bonferroni's test for post hoc comparisons did not, however, reveal any significant differences between the groups.

Summarizing, eight out of the initial twelve potentially discriminating baseline characteristics were related either to favorably or to unfavorably developing children. These were gender, mean age at admission, level of dependency, level of psychosocial problems, degree of social-emotional detachment, presence of child mental illness, presence of a history of maltreatment, and level of conflict with the substitute caregiver. Consequently, eight baseline characteristics were included in the multivariate analyses to answer research questions 2a and 2b.

Table 5

Significance levels and effect sizes of differences in baseline characteristics between the three groups of psychosocially unfavorably developing children ($N_{max} = 51$).

	FC ($n_{max} = 10$)	FGC ($n_{max} = 7$)	RC ($n_{max} = 34$)	Test	Effect size
	M (SD)	*M (SD)*	*M (SD)*		
Individual context					
Gender (% male)	50	57	68	Fisher's $p = .62$	.15
Mean age at admission (yrs.)	8.4(2.2)	9.8(1.6)	9.2(2.3)	$F(2, 48) = 0.81^{ns}$	.18
Psychosocial problems (T-score)	$61(9)_a$	$73(2)_{a,b}$	$63(7)_b$	$F(2, 48) = 5.95^{**}$	.50
Detachment (T-score)	71(16)	$78(15)_a$	$60(13)_a$	$F(2, 44) = 5.02^{*}$	.48
Child mental illness (%)	33	17	81	Fisher's $p = .00^{++}$	.54
Family context					
Child maltreatment (%)	90	67	21	Fisher's $p = .00^{+++}$	.59
Parental mental illness (%)	70	33	61	Fisher's $p = .38$	.21
Material problems/poverty (%)	60	17	33	Fisher's $p = .21$	.27
Conflicts (T-score)	69(19)	68(15)	58(12)	$F(2, 47) = 3.53^{*}$	.39
Dependency (T-score)	60(11)	63(5)	56(10)	$F(2, 47) = 1.21^{ns}$	.23
Care history context					
Number of placements	1.0(1.1)	2.2(0.8)	1.3(1.4)	$F(2, 45) = 1.65^{ns}$	.27
CPS custody (%)	90	71	61	Fisher's $p = .21$	.25

Note: FC Foster care, *FGC* family-style group care, *RC* residential care.

Note: Means with the same subscript differ significantly (Bonferroni's test).

$^{++}p < .01$, $^{+++}p < .001$ (Fisher's exact test with Cramer's V).

$^{*}p < .05$, $^{**}p < .01$ (ANOVA with Cohen's f).

Multivariate set of baseline characteristics distinguishing favorably and unfavorably developing children in FC, FGC, and RC

Baseline characteristics distinguishing favorably developing children

With regard to research question 2a, stepwise discriminant analysis resulted in two statistically significant discriminant functions distinguishing the groups of favorably developing children in FC, FGC, and RC. The first two columns of Table 6 list the statistics, group centroids, structure coefficients, and standardized discriminant function coefficients of both discriminant functions. The overall classification using both functions yielded a rate of 71.4% correct classifications, while a leave-one-out-cross-validation analysis yielded a rate of 67.1% correct classifications.

The first discriminant function explained 78.0% of the variance with a canonical correlation of .55 (R^2 = .30). The group centroids demonstrated that this function specifically discriminated between favorably developing children in foster care, and those in both residential care and (slightly less) in family-style group care. Examination of the structure coefficients indicated that the characteristics mean age of admission (r_s = .65), level of dependency (r_s = -.57), level of conflict (r_s = -.45), presence of child mental illness (r_s = .32), and a history of child maltreatment (r_s = -.30) were the significant characteristics substantially related to the difference between the favorably developing children in FC and FGC/RC.

The second discriminant function accounted for 22.0% of the variance with a canonical correlation of .33 (R^2 = .11). The group centroids demonstrated that this function particularly discriminated favorably developing children in family-style group care from those in residential and foster care, with gender (r_s = .98) being the most important characteristic in this distinction. This reflected the fact that all favorably developing children in family-style group care were girls.

In summary, these findings suggested that favorably developing foster children can be characterized as young school-aged children without serious mental health problems, who often had a history of child maltreatment. Furthermore, they demonstrated a dysfunctional dependency and a conflictual relationship with their foster parents during the first months of their stay. The profile of favorably developing children in family-style group care and residential care reflected the opposite. These were older school-aged children with more serious mental health problems. Moreover, they had a history of child maltreatment less often, and a less problematic pedagogical relationship with the substitute caregiver during the first month of placement. Remarkably, favorably developing children in family-style group care were only female, while favorably developing children in foster and residential care were both female and male.

Table 6
Group centroids and structure coefficients for canonical discriminant functions, separately for favorably and unfavorably developing children.

	Favorable development			Unfavorable development	
	Function 1	*Function 2*		*Function 1*	*Function 2*
Eigen Value	.43	.12		1.77	0.36
Canonical R	.55	.33		.80	.52
Wilk's Λ	.63	.89		.27	.73
$\chi^2(df)$	31.02(6)***	7.52(2)*		61.76(8)***	14.44(3)**
% of variance	78.0	22.0		82.9	17.1
Group centroids					
FC (*n* = 20)	-1.01	.04	FC (*n* = 10)	1.24	-1.04
FGC (*n* = 7)	.26	-1.01	FGC (*n* = 7)	2.49	.94
RC (*n* = 43)	.43	.17	RC (*n* = 34)	-.88	.11
Structure coefficients (r_s)[a]					
Gender	.16	<u>.98</u>		-.13	.15
Age at admission	<u>.65</u>	-.29		.00	<u>.30</u>
Psychosocial problems	-.20	.13		.23	<u>.66</u>
Detachment	-.26	.18		<u>.36</u>	<u>.31</u>
Child mental illness	<u>.32</u>	.13		<u>-.53</u>	.12
Child maltreatment	<u>-.30</u>	-.12		<u>.48</u>	<u>-.60</u>
Conflicts	<u>-.45</u>	.07		.13	.05
Dependency	<u>-.57</u>	-.15		-.04	.00
Standardized discriminant coefficients					
Gender	.14	.97			
Age of admission	.85	-.18		.67	.42
Dependency	-.75	.07			
Psychosocial problems				.50	.83
Child mental illness				-1.04	-.18
Child maltreatment				.69	-.58

Note: FC foster care, FGC family-style group care, RC residential care
*$p<.05$; ** $p < .01$; *** $p < .001$
[a] Underlined structure coefficients were significant ($-.30 > r > .30$)

Baseline characteristics distinguishing unfavorably developing children

With regard to research question 2, stepwise discriminant analysis resulted in two statistically significant discriminant functions differentiating the groups of unfavorably developing children in FC, FGC, and RC. The second two columns of Table 6 list the statistics, group centroids, structure coefficients, and standardized discriminant function coefficients of both discriminant functions. The overall classification yielded a rate of 92.2% correct classifications. When conducting a leave-one-out-cross-validation analysis, 88.2% were classified correctly.

The first discriminant function explained 82.9% of the variance with a canonical correlation of .80 (R^2 = .64). Based on the group centroids, this function particularly discriminated unfavorably developing children in family-style group care from those in residential care, with unfavorably developing foster children in between. The baseline characteristics child mental illness (r_s = -.53), a history of child maltreatment (r_s = .48), and the level of social emotional detachment (r_s = .36) substantially correlated to the first function.

The second discriminant function accounted for another 17.1% of the variance with a canonical correlation of .52 (R^2 = .27). This function particularly distinguished unfavorably developing foster children from unfavorably developing children in family-style group care, with unfavorably developing residentially placed children in between. The structure coefficients revealed that the level of psychosocial problems (r_s = .66), a history of maltreatment (r_s = -.60), the level of detachment (r_s = .31), and the age at admission (r_s = .30) substantially correlated to the discriminant function distinguishing the aforementioned groups of children.

Summarizing, these findings suggested that unfavorably developing foster children can be characterized as young, social-emotionally detached children without serious psychosocial problems, burdened with a history of child maltreatment. Conversely, unfavorably developing children in family-style group care can be characterized as older, social-emotionally detached children with serious psychosocial problems, not caused by specific child mental illness, and with less often a history of maltreatment. However, compared to unfavorably developing residentially placed children, the occurrence of a history of maltreatment was still higher. Finally, unfavorably developing residentially placed children can be depicted as children who have less often been the subject of maltreatment. Furthermore, these children showed fewer signs of social-emotional detachment, but they often had (other) mental health problems.

DISCUSSION

An out-of-home placement is an intrusive intervention in a child's life, and is only recommended when child protection services exhaust other less intrusive options. In such cases, it is important to allocate the child to a setting that best fits the existing risks and needs at the time of admission, or to address risk factors right from the beginning, in order to achieve the maximum possible psychosocial development. This study explored whether a set of certain baseline child, family, and care characteristics could serve as an indicator for either favorable or unfavorable psychosocial development during the first year of placement within one of the three main 24-h settings for out-of-home care (foster care, family-style group care, residential care). Five hypotheses were used to answer this main question.

Our first hypothesis stated that the quality of the pedagogical relationship between the substitute caregiver and the out-of-home placed child is equally positively related to the psychosocial development in all three 24-h settings. Our data did not fully support this hypothesis, as for foster care the opposite appeared to be true. As regards the level of dependency, a higher instead of a lower level of dependency substantially discriminated favorably developing foster children from those in residential care, in which a higher level

was associated with better odds for favorable psychosocial development in foster children. With respect to the level of conflict, higher levels of conflict also contributed to the distinction between favorably developing foster children and favorably developing residentially placed children. However, this seemed to be particularly true for a mild level of conflict with foster parents, when considering the differences in levels of conflict between favorably and unfavorably developing foster children. Altogether, (mild) problems in the pedagogical relationship between the foster child and foster parents may not be direct reason for concern, as it does not seem to hamper favorable psychosocial development. The relationship between the child and the foster parents probably needs some time to develop, as suggested by Sainsbury (2004).

The second hypothesis stated that the number of placements particularly discriminates between unfavorably developing foster children and those in residential care. This hypothesis is rejected, as no (univariate) differences were found between the number of placements and the three groups of unfavorably developing children in the first place. Based on that finding, this baseline characteristic has been excluded from further multivariate analyses. Nonetheless, it is plausible that the number of placements, in particular, have had a mediating effect on the relationship between the level of psychosocial and detachment problems, and placement outcome (e.g., Eggertsen, 2008; Whenan et al., 2009). Moreover, the age of admission is inextricably linked to the length of the care history, and the age of admission did appear to affect the outcome measure, in accordance with literature data (e.g., Baker, Wulczyn, & Dale, 2005; Scholte & Van der Ploeg, 2007). Additional research is required to further examine the possibility of an interfering relationship.

Regarding the third hypothesis, the findings partly confirmed that a history of maltreatment discriminated unfavorably developing children in family-based settings from those in residential care. First, the occurrence of a history of maltreatment was a discriminating characteristic for unfavorably developing foster children (from those in family-style group care), in accordance with the literature data by Pears, Kim, Fisher, and Yoerger (2013). Furthermore, a history of maltreatment also discriminated unfavorably developing children in family-style group care from those in residential care.

In contrast, the presence of a history of maltreatment also appeared to discriminate favorably developing foster children from those in residential care. This is possibly due to the broad construct being used to define child maltreatment, including both physical and emotional abuse, sexual abuse, and physical or emotional neglect. The literature data state that the impact of child maltreatment on a child’s development differs across the different types of maltreatment (Gilbert et al., 2009; Petrenko, Friend, Garrido, Taussig, & Culhane, 2012), in which neglect seems to generate the highest risks (Barber & Delfabbro, 2009; Spinhoven et al., 2010). Further research is needed to refine the effect of different types of maltreatment on the psychosocial development within and across the different types of out-of-home care.

The fourth hypothesis was that a high level of psychosocial problems negatively affects psychosocial development, in which this relationship, in particular, will discriminate unfavorably developing foster children from unfavorably developing children in family-style group and residential care. The findings partly supported this hypothesis. Although a high level of psychosocial problems was indeed related to unfavorable psychosocial development,

this was not explicitly applicable for foster care, but rather for family-style group care. A univariate comparison of the level of psychosocial problems at the time of admission of unfavorably developing children revealed that the children in family-style group care demonstrated the highest levels of psychosocial problems. This corresponds to the current Dutch tendency to allocate children with a long-term care history and severe individual problems to family-style group care as long-stay placement, instead of placement at home or in foster care (Leloux-Opmeer et al., 2017a). Consequently, extending the individual treatment opportunities within this setting is recommended because of the high level of psychosocial problems.

Ultimately, the results partly confirmed the hypothesis that higher levels of signs of social-emotional detachment at the time of admission were associated with unfavorable psychosocial development, but this applied particularly to unfavorably developing children in the two family-based settings rather than to those in residential care. First, a univariate comparison of the prestart level of detachment of unfavorably developing children indicated a significantly higher level of detachment problems among children in family-style group care compared to those in residential care. This likely reflects the aforementioned (last resort) position of family-style group care on the continuum of (24-h) care. In addition, multivariate analysis demonstrated that the level of baseline social-emotional detachment was related to unfavorable child development in both family-style group and foster care. This might indicate that children with signs of social-emotional detachment have difficulties to cope with the continuous and close relationship that is available in these family-based settings in particular.

Summarizing the results, for foster care, special attention is needed for children with a history of maltreatment and signs of social-emotional detachment in order to prevent them from unfavorable psychosocial development. Additionally, mild levels of conflict and dependency should be monitored, but does not seem to require immediate intervention. With regard to family-style group care, severe individual psychosocial and detachment problems increased the odds of unfavorable psychosocial development and required additional individual treatment. It is possible that the level of individual problems was affected by a history of maltreatment, as this indicator was also identified as being a risk factor within family-style group care. Finally, for residentially placed children, the most significant indicator was the presence of child mental illness, which appeared to be associated with unfavorable psychosocial development, in accordance with the literature data (e.g., Xue et al., 2004). As a result, diagnostic assessment of the child, and collaboration between youth care services and child mental health services is recommended (Lee & Thompson, 2008).

Strengths and limitations

A key strength of this study involves the triple comparison of discriminating characteristics in three of the main settings of out-of-home care; no other triple comparisons have been found in the literature data. The second strength of this study is the broad approach employed in composing a set of potential baseline indicators, whereby the set covers several developmental contexts (i.e., child, family, and care context). Finally, the set indicators for favorable and unfavorable development all consist of characteristics preceding, or assessable at the very beginning of the placement. This enhances the practicality in decision-making strategies or preventive interventions right from the beginning of the out-of-home placement.

Despite the strengths of this study, some limitations should be considered with respect to the validity and generalizability of the results. First, the sample sizes of the subgroups were not evenly distributed and the size of the subgroup family-style group care, in particular, was small, which may have limited the statistical power. Combining both family-based subgroups to enhance the power was, however, not justified due to the large differences in case characteristics (e.g., clinical needs, age, care history) between the two family-based groups of children (Leloux-Opmeer et al., 2016; Lausten, 2015; Lee & Thompson, 2008). All statistics were, therefore, complemented with effect sizes to provide additional insight into the study's ability to detect small differences. Second, despite the broad approach, the set of potential indicators does not pretend to be all-inclusive. Conceivably, by including other characteristics (e.g., provided therapy, the child's learnability, the expertise of the substitute caregiver), the findings will be further differentiated. Finally, this study specifically focused on a single global outcome measure. By including more outcome measures (e.g., development in school functioning, impairment of family-functioning), or combining measures, the findings might also be refined. However, adding more outcome variables to the current number of dependent and independent variables already being used in this study would make the interpretation of the results disproportionately complex.

Conclusion

In general, this study showed an equal percentage of children with favorable and unfavorable psychosocial development during the first year of placement in foster, family-style group, and residential care, suggesting the comparable effectiveness of each setting for its particular target group. In addition, the results suggested that favorable psychosocial development was less able to be predicted than unfavorable development. Furthermore, the findings indicated that each type of care has its own specific set of baseline child, family, and care characteristics that are related to the degree of a child's psychosocial development. Further research is needed to refine the results so that they can be used for the development of a risk-need-responsivity model to support both the decision-making processes and monitoring of out-of-home placements. This will likely improve the youth care system.

6 General Discussion

INTRODUCTION

The costs of youth care services recently soared to unsustainable levels, resulting in urgent calls for reform of the system (e.g., Bosscher, 2014; Fegert & Stötzel, 2016; Klag et al., 2016; Menozzi, 2016; World Health Organization, 2014). The reform called for should place greater emphasis on preventive and in-home (support) services, attempt to reduce the use of (specialized) out-of-home care services, and simultaneously improve the quality of the remaining specialized 24-h care services (Bosscher, 2014; Courtney, 2000; Hilverdink, Daamen, & Vink, 2015). To enhance the quality of specialized 24-h care services, knowledge concerning the baseline child and family characteristics of out-of-home placed children, and the link(s) between these baseline factors and children's development in the various 24-h settings is required (Anderson, Lyons, Giles, Price, & Estle, 2003; Barth, 2002; Conn, Szilagyi, Jee, Blumkin, & Szilagyi, 2015; Courtney, 2000; Frensch & Cameron, 2002; Klag et al., 2016; McCrae, Lee, Barth, & Rauktis, 2010; Strijker, Zandberg, & Van der Meulen, 2002). When the identified baseline factors are linked to favorable and unfavorable psychosocial development of these out-of-home placed children, the findings obtained have the potential to supply building blocks for the development of sound decision-making strategies for referral to a certain type of out-of-home care. In addition, the findings provide insight into which child and family factors need additional treatment during placement. Together, this increases the likelihood that children for whom (temporary) out-of-home placement is inevitable will receive the most effective service with regard to their developmental needs.

The primary objective of this thesis was to extend knowledge of this topic by (1) identifying the typical child and family characteristics for each of the three main types of out-of-home care at the time of admission and (2) linking these baseline factors to favorable and unfavorable psychosocial development of children during the first year of placement. This was done with the aim of supplying evidence-based building blocks for the development of a decision-making tool intended to support referral to the most appropriate and effective out-of-home care services given the baseline circumstances. To this end, first, child and family characteristics at the time of admission to foster care, family-style group care, and residential care were investigated by means of a scoping review (see Chapter 2) and a cross-sectional empirical study of a sample of 200 Dutch primary school-aged children (see Chapter 3). The findings revealed considerable differences in baseline factors between the children in the three settings examined. This suggested that the three types of care individually serve a specific target group. Second, the psychosocial development of children placed out-of-home was investigated through a follow-up cohort study (see Chapter 4). The findings of this study suggested that the percentage of children who developed favorably in the three examined settings was broadly equal, despite considerable differences in their baseline child and family characteristics. Finally, the link(s) between the baseline factors on the one hand and (un)favorable child psychosocial development on the other was studied by means of discriminant analyses (see Chapter 5). The findings indicated that certain sets of baseline factors are indeed related to children's psychosocial development in the three types of out-of-home care and can thus be nominated as building blocks for the development of sound decision-making strategies. Both favorably and unfavorably developing children had different

sets of baseline factors at the time of admission, both in and across the three types of care. This was particularly evident for unfavorably developing children.

In this final chapter, we reflect on the main findings of this thesis and discuss their implications for clinical practice; in this discussion, the adapted version of Kerig, Ludlow, and Wenar's model (2012) again serves as a framework. In this transactional developmental model a child's development is perceived as being a product of the dynamic interactions that that child with his or her developmental contexts (e.g., individual, family, and care context) during the series of successive developmental processes children undergo (see Figure 1 in the introduction). The building blocks for the development of decision-making strategies, which are based on the baseline factors which both univariately and multivariately distinguished between favorably or unfavorably developing children in the three 24-h settings investigated (see Chapter 5), are presented first. Subsequently, the practical implications for the current overall care context are discussed. Thereafter, the strengths and limitations of the study are discussed, and directions for future research are proposed. The chapter ends with an overall conclusion.

BUILDING BLOCKS FOR DECISION-MAKING STRATEGIES

Building blocks identified in the individual (child) context

Within the individual context, five baseline factors were identified to be both univariately and multivariately significantly related to favorable or unfavorable psychosocial development and are therefore designated as building blocks. These factors were quality of attachment, level of psychosocial functioning, presence of child mental illness, age of admission, and gender.

Quality of attachment

First, the quality of attachment at the time of admission is an important building block, as it is related to a child's level of psychosocial development. In addition, attachment is an important topic because the associated attachment theory is at the heart of the question of whether residential care should be part of the continuum of out-of-home care. Moreover, it is also central to the question of whether an out-of-home placement should be used at all (Bowlby, 1952; Bruskas, 2008; Schneider & Phares, 2005; Textor, 1993).

According to the literature, attachment-related problems are the least common in foster children. Lee (2010), for example, states that children with such problems are approximately 75% less likely to be placed in a family-based setting. This was partly confirmed in our empirical study, as case file records indicated that only15% of the foster children has been diagnosed with reactive attachment disorder (RAD) (see Chapter 3). Nevertheless, additional analyses showed (sub)clinical levels of social-emotional detachment in 51% (n = 45) of the foster children at the time of admission, as reported on the social-emotional detachment questionnaire (SEDQ) (Leloux-Opmeer, Kuiper, & Scholte, 2015); multivariate analysis showed that these (sub)clinical levels were related to unfavorable psychosocial development in foster children.

The high number of children with attachment problems found in family-style group care (which is also a family-based setting) was also inconsistent with the aforementioned claim of

Lee (2010). Case file information indicated that at least one in three children has been diagnosed with RAD. In addition, the clinical level of attachment problems as reported on the SEDQ was significantly higher than the level of problems reported for residentially placed children (see Chapter 3). These findings most likely reflect the “last resort” position that family-style group care currently occupies in the Dutch continuum of care; the high number of previous placements prior to placement in this type of care also suggests this (see Chapter 3). Additional analyses showed a mean of 5.4 (SD = 2.3, n = 29) years of youth care services usage prior to the current placement (Leloux-Opmeer et al., 2015). The level of baseline social-emotional detachment was found to be both univariately and multivariately related to unfavorable child development in family-style group care in particular.

Finally, the mean baseline level of clinical detachment problems (based on the SEDQ) found in residential care was unexpectedly found to be significantly lower than in family-style group care (see Chapter 3). Nevertheless, one in three residentially placed children was diagnosed with RAD according to case file records. This finding emphasizes the urgency to screen and treat attachment problems in residentially placed children right from the start in order to re-enable detached children to develop new, healthier relationships. This will probably also increase the odds for successful relocation to family-based settings (Bowlby, 1952; Textor, 1993), thus supporting the aim of decreasing the long-term usage of institutional care. Furthermore, with regard to residential care, the findings of additional analyses also demonstrated the importance of identifying children without attachment problems as well, as these children are particularly at risk of developing unfavorable attachments in this setting (Leloux-Opmeer, Kuiper, & Scholte, 2016). It is possible that these well-attached children would have benefited more from a family-based setting.

Altogether, it is strongly recommended to systematically screen for attachment-related problems at the time of admission to 24-h care services and to treat identified problems right from the start, as doing so would increase the likelihood of positive placement outcome.

Level of children’s psychosocial functioning

A second building block for the development of a sound decision-making strategy for referral to a certain type of out-of-home care is the baseline level of a child’s psychosocial functioning. A high level of psychosocial problems negatively affects placement outcomes (e.g., Becker, Jordan, & Larsen, 2007; Den Dunnen et al., 2012; Jones et al., 2011; Raviv, Taussig, Culhane, & Garrido, 2010), increases the likelihood of placement breakdowns, particularly in foster care (e.g., Aarons et al., 2010; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007; Vanschoonlandt, Vanderfaeillie, Van Holen, & De Maeyer, 2012), and, in our empirical study, was found to be univariately and multivariately related to unfavorable psychosocial development.

Although the number of favorably developing children during the first year of placement was broadly equal across the three settings (when controlled for baseline functioning), the average level of psychosocial problems in foster children slightly increased (at a trend level), similarly to findings in the literature (Lawrence, Carlson, & Egeland, 2006; Vanderfaeillie, Van Holen, Vanschoonlandt, Robberechts, & Stroobants, 2013). Since this deterioration in psychosocial functioning specifically concerned foster children without clinical psychosocial problems at the time of admission, it may reflect an effect associated with disrupted

attachment to biological parents (Racusin, Maerlender, Sengupta, Isquith, & Straus, 2005). However, not all of the literature sources related to this topic are in accordance with these findings. The meta-analysis conducted by Goemans, van Geel, and Vedder (2015), for example, showed no significant change in the psychosocial functioning of foster children during placement, and a meta-analysis conducted by Li, Chng, and Chu (2017) reported an improvement in psychosocial outcomes in favor of foster care when compared to residential care. Such mixed findings are likely due to factors such as study quality, measurement, source, the duration of and number of placements included in the studies, or to combinations of these factors (Li et al., 2017). In any event, with regard to foster care, both literature data and our empirical study showed that children in these settings, on average, have fewer and less serious psychosocial problems when compared to children in family-style group and residential care. Nevertheless, both sources also showed that a third to even more than half of foster children still demonstrate behavioral problems (e.g., Bernedo, Salas, Fuentes, & García-Martín, 2014; James, Roesch, & Zhang, 2012; Vanderfaeillie et al., 2013). This suggests that a considerable number of foster children are at risk of a placement breakdown.

With regard to residential care, the high number of children with psychosocial problems at the time of admission based on case file information (see Chapter 3) was not surprising; children with severe psychosocial problems are particularly referred to this setting due to its integrated and extended treatment milieu, which is assumed to be able to successfully address such severe problems (e.g., Conn et al., 2015; De Swart et al., 2012; Whittaker et al., 2015). Our findings support this suggestion, as the number of favorably developing residentially placed children was comparable to those found in the two family-based settings, despite the higher number of children with severe psychosocial problems at the time of admission to residential care.

Finally, the empirical findings concerning the level of psychosocial problems in children in family-style group care were remarkable. The high level of psychosocial problems reported by the group parents, combined with the aforementioned serious signs of social and emotional detachment, indicates that a significant amount of strain is placed on group parents right from the start of the placement (see Chapter 3). It is conceivable that these problems are, similarly to the baseline attachment problems, related to the last-resort position that family-style group care currently occupies in the Netherlands. Despite the finding that children in family-style group care do show a slight improvement in psychosocial (emotional) functioning, the mean posttest score remained at a (sub)clinical level. Thus, systematic screening of psychosocial functioning at the time of admission and additional treatment for children with clinical psychosocial functioning are recommended. This is especially important in family-style group care, as our findings suggest that group parents in particular require support to handle children with various severe social and emotional problems adequately.

Presence of child mental illness

The third baseline factor in the individual context which can be nominated as a building block for referral strategies is the presence of child mental illness. This risk factor is, among other things, related to behavioral problems, and, subsequently, to negative placement outcomes (e.g., Akister, Owens, & Goodyer, 2010; Raviv et al., 2010). Mental illnesses (such

as depression, anxiety, or post-traumatic stress disorder) in out-of-home placed children is often related to adverse family circumstances, such as child abuse or neglect (e.g., Swanke, Yampolskaya, Strozier, & Armstrong, 2016; World Health Organization, 2014). According to Akister et al. (2010), the prevalence of mental illness among children in care is approximately 50%; this is higher than for children with similar backgrounds who remain at home (Ford, Vostanis, Meltzer, & Goodman, 2007; Racusin et al., 2005), indicating that other factors, such as learning disabilities or neurodevelopmental disorders, also seem to be involved in out-of-home placed children.

Children with mental illnesses would be most represented in residential care (Akister et al., 2010; James, 2006; Tarren-Sweeney, 2008b). The findings from our empirical study confirm this, as the number of children with (an indication of) mental illness was significant higher (69%) for residentially placed children than for children in foster care (27%) or family-style group care (44%) (see Chapter 3). Moreover, particularly for residentially placed children, the presence of child mental illness was associated with unfavorable psychosocial development (see Chapter 5). Additional analyses showed, however, that psychiatrists were consulted approximately six times more often in family-style group care (59%) than in residential care (11%) (Leloux-Opmeer, Kuiper, & Scholte, 2016). In line with the prevailing findings, we therefore advocate structural assessment of a child's mental health at the time of admission and close cooperation between youth care services and mental health services in order to effectively address such problems, particularly in the case of residential care (Akister et al., 2010; Bai, Wells, & Hillemeier, 2009; Burns et al., 2004; Ford et al., 2007; Tarren-Sweeney, 2008b).

Age of admission and gender

Finally, the baseline factors *age of admission* and *gender* were found to be multivariately related to the level of psychosocial development, thus making it possible to also designate them as building blocks for the development of decision-making strategies for optimal out-of-home care. Although both baseline factors differ from the aforementioned factors in that they are intrinsically non-treatable, they can still be used for improving referral strategies and treatment conditions. With regard to gender, discriminant analysis showed that all of the favorably developing children in family-style group care were girls. Practically, this implies that, particularly for boys, psychosocial development should be monitored more closely and guided effectively when children are placed in family-style group care.

As for age of admission our findings seemed to indicate that older primary school-aged foster children, in particular are more likely to develop unfavorably. However, it cannot be ruled out that these findings partly reflect the current least restrictive policy, as described previously (see Chapter 1). Nevertheless, in practice, it is suggested that, when placing an older primary school-aged child in foster care, his or her psychosocial development should be closely monitored in order to provide timely support to the foster child and his or her foster parents if necessary.

Building blocks identified in the (substitute) family context

Family functioning in out-of-home placed children is important in many ways. First, from the perspective of the transactional model, the family context provides the most important context for a child's development. Aiming to address unfavorable child development therefore means, among other things, improving the interplay between a child and his or her family context (Kerig et al., 2012; Newton, 2017). Furthermore, risky family circumstances are a main reason for out-of-home placement, especially for young children (Esposito et al., 2013; Yampolskaya, Sharrock, Armstrong, Strozier, & Swanke, 2014). Addressing these risky circumstances during placement is a prerequisite for successful reunification (López, Del Valle, Montserrat, & Bravo, 2013; Vanderfaeillie, Damen, Pijnenburg, Van den Bergh, & Van Holen, 2016; Wulczyn, Chen, & Orlebeke, 2009). Finally, strengthening parenting capacities will contribute both to de-institutionalisation and to the prevention of out-of-home placement in the first place, both of which are priorities of the new Youth Act (Bosscher, 2014; Newton, 2017). In our study, two baseline factors in the (substitute) family context were identified as both building blocks for the development of decision-making strategies intended to improve matching to out-of-home care and as indicators of the need for preventive interventions intended to address co-occurring problems. These were the presence of a history of maltreatment and the quality of a child's pedagogical relationship with his or her substitute caregiver.

History of maltreatment

The first building block within the (substitute) family context is the presence of a history of maltreatment, which has detrimental effects on a child's development (e.g., Oswald, 2010; Stone, 2007; Stubenbort, Cohen, & Trybalski, 2010; World Health Organization, 2014). Approximately a quarter of abused children develops a post-traumatic stress disorder (World Health Organization, 2014); such a history carries the risk of intergenerational transmission of maltreatment (e.g., Buss et al., 2017; World Health Organization, 2014). As expected, a history of maltreatment was found to be related to unfavorable development; this relationship was most reflected in foster care (and, to a lesser extent, in family-style group care). Almost all (90%) of the unfavorably developing foster children had such a history. Surprisingly, however, having a history of maltreatment was also linked to favorable development in foster children. It was suggested that this contradiction may be attributed to the broad construct that was used to define maltreatment during the discriminant analyses (see Chapter 5). The results of both the scoping review (see Chapter 2) and the cross-sectional study (see Chapter 3) support this hypothesis, as differences were found between the three settings with respect to the different types of maltreatment. A history of child neglect was most frequently reported for foster children (60%) and, according to the literature, this form of maltreatment has the most serious consequences (Barber & Delfabbro, 2009; Spinhoven et al., 2010). The finding that neglect most commonly occurs in foster care may be explained by the accompanying high prevalence of individual parental problems, as reported in the scoping review. The results of the cross-sectional study accordingly showed that three-quarters of the biological parents of the children considered suffered from mental illness, and a similar number had material problems. Both are major risk factors for maltreatment and other adverse outcomes

(e.g., Pengpid & Peltzer, 2017; Reading, 2008; World Health Organization, 2014). The prevalence and the associated consequences of maltreatment outlined above emphasize the urgency for a systematic examination of trauma-related disorders and the incorporation of trauma-focused interventions into practice, as suggested by the literature (Den Dunnen et al., 2012; Oswald, 2010; Stewart, Leschied, den Dunnen, Zalmanowitz, & Baiden, 2013).

Quality of the pedagogical relationship

The second baseline factor that serves as building block for assigning additional support or treatment is part of the substitute family context and concerns the quality of a child's pedagogical relationship with the substitute caregiver. This factor was included in our study because the quality of a child's attachment is reflected in this pedagogical relationship (Koomen, Verschuren, & Pianta, 2007), and a healthy relationship with the substitute caregiver is positively related to age-appropriate psychosocial development (Bakermans-Kranenburg et al., 2011; Van den Bergh & Weterings, 2010; Whenan, Oxlad, & Lushington, 2009). According to the findings of the cross-sectional study, the overall quality of the pedagogical relationship shortly after admission was comparable between the settings, though some particular dimensions of the quality of this relationship differed negatively in the case of foster care. Foster parents reported relatively high levels of conflict and negative dependency at the time of admission, which seems to contradict the low prevalence of attachment-related problems in foster children at admission (as reported previously). However, combined with the finding that favorably developing foster children more frequently exhibited signs of negative dependency towards their foster parents shortly after admission, both findings can alternatively be perceived as healthy responses on the part of well-attached children to separation from their biological parents (Ainsworth, 1969; Bowlby, 1952). It should, however, be noted that this association with favorable development in foster children was particularly true for children who experienced mild problems in their pedagogical relationship with their foster parents. Overall, the findings suggest that the levels of conflict and dependency in the pedagogical relationship between a foster child and his or her foster parents should be closely monitored, as the severity of these problems serves as an indicator of whether immediate intervention is required.

PRACTICAL IMPLICATIONS FOR THE OVERALL CARE CONTEXT

As stressed in the general introduction, the current stepped-care model for referral to out-of-home care services has been operationalized and practiced in a very rigid manner. This has, among other things, contributed to both lengthy care pathways and substantial numbers of children and families who are not benefiting from the services and treatments offered. Since this was also reflected in our empirical study, it is recommended to shift towards the use of a matched-care model for allocation. Such a call for personalized matched care is also found in the literature, in which different expressions, such as "stratified care," "allocated care," and "(integrated) collaborative care" (Boyd, 2016; Henderson et al., 2017; National Institute for Health and Care Excellence, 2009; Van der Feltz-Cornelis, Van Marwijk, Hakkaart-van Roijen, Carvalho, & McIntyre, 2017), are used to refer to such a model. Regardless of the term chosen, in our opinion, three fundamental steps are required to

transform the current practice of out-of-home care services to the use of a more collaborative, effective, and matched-care model: (1) the implementation of integral risks and needs assessment, (2) an optimal matching of these risks and needs with an appropriate integral set of interventions, and (3) the use of outcome monitoring, with adjustments being made to services and treatment if necessary. In this way, a “collaborative matched-care model” emerges; such a model would be especially suitable for addressing chronic problems (National Institute for Health and Care Excellence, 2009; Van der Feltz-Cornelis et al., 2017), which often occur in out-of-home placed children and their families. The suggested steps, and their practical implications for the care context, are briefly discussed below.

Step 1: Implementing integral risks and needs assessment

Integral risks and needs assessment prior to (or soon after) referral to out-of-home care is essential in order to be able to provide matched and effective care and to support placement by providing suitable additional treatments. Such a comprehensive approach is consistent with the finding in both the literature and our empirical study that the cumulative effect of baseline (risk) factors co-determines the outcome of out-of-home placement. The results of an integral assessment will assist in determining who should be treated (risks), what should be treated (needs), and in which way (responsivity), as, for example, suggested by the RNR model developed by Andrews and Bonta (Andrews, Bonta, & Wormith, 2011; Bonta & Andrews, 2007). This will subsequently contribute to the prevention of over- or under-treatment (Van der Feltz-Cornelis et al., 2017). As outlined in the previous section, the seven identified baseline factors should, in any event, be assessed or at least taken into account due to their links with the degree and manner of a child’s psychosocial development during out-of-home placement. Furthermore, assessing the need for (biological) family strengthening in order to (re-)enable the biological parent(s) to care for and support their own children is also indispensable for the goal of de-institutionalization (Newton, 2017).

Step 2: Matching a set of appropriate interventions

For well-informed and optimal matching of 24-h settings to baseline child and family risks and needs, several preconditions should be taken into account. First, evidence-based knowledge is required concerning the extent to which the various settings of out-of-home care can promote positive psychosocial child development and family development given the baseline child and family risks and needs in a particular case. Based on our empirical findings, it could be broadly concluded that (1) foster care is particularly suitable for young maltreated children with singular, minor individual problems; (2) placement in family-style group care is most appropriate for older, well-attached primary school-aged girls with mental health issues that are not accompanied with serious psychosocial dysfunction; and (3) residential care is most suitable for older, maltreated and social-emotionally detached children with serious psychosocial problems but without underlying mental illness, who require a (short-term) integrated educational environment for intensive and restrictive treatment on multiple areas (such as individual, school, family, peers). To move forward, these findings should be combined with existing knowledge concerning crucial baseline factors from the literature data in order to develop comprehensive evidence-based decision-

making strategies for out-of-home care (e.g., Akister et al., 2010; Chor, McClelland, Weiner, Jordan, & Lyons, 2012; Vanderfaeillie et al., 2016).

The second condition for well-informed matching is the importance of recognizing which aspects of each setting carry the benefits and which the risks (Li et al., 2017). Our empirical findings showed, for example, that children with no or mild attachment-related problems are disadvantaged in residential care and may benefit more from a home-like setting with live-in caregivers. In contrast, maltreated children with severe psychosocial problems, signs of detachment, and school-related problems were found to develop unfavorably in family-based settings in particular and would benefit more from an integrated treatment setting with an incorporated school. Beyond that, in every case, it should be considered whether an out-of-home placement, in itself, will prove more harmful rather than beneficial in terms of the development and well-being of a child (e.g., Bruskas, 2008; Pinto & Maia, 2013; Schneider & Phares, 2005). A systematic review of long-term results of former out-of-home placed children compared to long-term results of peers from general populations revealed, for example, that the former more frequently suffered from mental health issues and had a higher prevalence of substance abuse (Gypen, Vanderfaeillie, De Maeyer, Belenger, & Van Holen, 2017). They also achieved high school diplomas less frequently and completed post-secondary schooling even less frequently (Gypen et al., 2017).

Third, we plead for a deepening of the continuum of out-of-home care by means of adapting and expanding the current services to improve matching. The usage of family-style group care could, for example, be expanded further, as this setting is an almost ideal type of substitute care, due to its home-likeness and the presence of pedagogically trained in-home caregivers (Van IJzendoorn et al., 2011). Furthermore, there is an increasing demand for the deployment of treatment foster care services (Farmer, Wagner, Burns, & Richards, 2003; James, 2006; Racusin et al., 2005; Villagrana, 2010). The emphasis on expanding and strengthening both family-based settings is strongly in line with the aims of the current transformation of the youth care system. The deepening of the continuum should also involve the development of new, combined types of 24-h care for the risks and needs of children that, thus far, we have been unable to address. For example, the strength of family-based settings, including the possibility of stable, long-term relationships, could be combined with the integrated and extended treatment and educational possibilities offered by institutional environments by establishing small family-group homes in such environments, in order to treat children with serious, multiple long-term problems from very dysfunctional families. Such combinations of care services are referred to as “mixed models of matched care” (Boyd, 2016).

Finally, in addition to the need to deepen the 24-h care services outlined in the preceding section, we urge a broadening of the care services in order to achieve optimal matching. This means crossing boundaries by entering into interorganizational relationships with other sectors concerned with care services, such as education, justice, addiction treatment centers, domestic violence agencies, child and adult mental health service providers, and debt assistance (Bai et al., 2009; Burns et al., 2004; World Health Organization, 2014). The results of this study showed, for example, that both material problems and parental mental illness are often co-occurring problems in the lives of out-of-home placed children, implying that additional adult services are urgently required. Addressing multiple risks and needs thus

requires a set of interventions in addition to out-of-home placement on its own. Although combining placement with additional, personalized child and family interventions from different sectors of care services may seem more expensive or less efficient in the short term, it will, in our opinion, increase effectiveness and efficiency in the long term.

Step 3: The use of outcome monitoring

A third step for increasing the effectiveness of youth care services is to use routine outcome monitoring (ROM). Routine outcome monitoring data can provide practitioners with alerts that indicate whether or not the provided services and treatment are effective, ineffective, or even harmful; in that latter case, such alerts indicate a need to adjust the services or treatment in question (Boswell, Kraus, Miller, & Lambert, 2015). Furthermore, by combining ROM data concerning various baseline child and family characteristics, it becomes possible to distinguish between different diagnostic subgroups. This results in a differentiation of knowledge concerning effectiveness and subsequently allows better matching between risks and needs on the one hand and the preferred treatment on the other (De Beurs et al., 2011). Providing feedback concerning the results to both clients and practitioners is, however, a prerequisite in this (Bickman, Lyon, & Wolpert, 2016; Boswell et al., 2015; De Beurs et al., 2011).

STRENGTHS, LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Strengths and limitations

Although our thesis yields interesting information concerning the similarities and differences in the baseline characteristics and the psychosocial development of children in various settings of out-of-home care, some limitations should be considered. First, the quasi-experimental design used in the empirical study may have increased the likelihood of systematic differences and regression to the mean. However, randomizing the allocation to a certain type of 24-h care was not an option for ethical reasons. Furthermore, by relying on common practice, the study approximated reality to the greatest degree possible (Barber & Delfabbro, 2002; Wilson, Sinclair, Taylor, & Pithouse, 2004).

Second, a limited number of children in family-style group care participated in the empirical study, which may have hampered statistical power. Nevertheless, combining both family-based settings (foster and family-style group care) to enhance the statistical power of the study was not an option due to large differences in baseline child and family characteristics. Furthermore, the triple comparison of the three main types of care is a major strength of this study, as no other studies that conducted such a comparison were found. Moreover, effect sizes for all of the statistical findings were added in order to provide insight into the possible influence of a lack of statistical power (Cohen, 1992).

Third, the comparison between the three main settings would have been more complete if all of the baseline factors related to outcomes had been included (e.g., a child’s learnability/IQ, quality of care, additional therapy provided, etc.). However, only major baseline child, family, and care characteristics based on both literature data and empirical findings, were included in this study. Adding additional factors to this set would have negatively affected the statistical power and the interpretability of the findings.

Finally, the findings showed that the positions of Dutch family-style group care and residential care on the continuum of care seem to differ slightly from those reported in the international literature. This should be taken into account when comparing the findings with other research data. However, the findings related to the family-based and residential settings are still considered relevant, regardless of the structure of the continuum of care in a particular nation.

Directions for future research

Based on our study's findings, the following directions for future research are suggested. First, which types of maltreatment specifically affect unfavorable psychosocial development in foster children should be further investigated. Refinement of this building block would result in better defined subtypes of foster children. These could be used to refine referral to foster care services and additional treatments, which is expected to promote the appropriateness and effectiveness of foster care placements.

Second, it is recommended that the psychosocial development of psychosocially healthy foster children from dysfunctional families of origin be compared with that of children of a similar background who remained at home and received in-home support services. The findings showed that such foster children, in particular, develop in a psychosocially unfavorable manner. It is possible that these out-of-home placed children are ultimately at a disadvantage due to the immense stress of being removed from their biological parents.

Third, little is currently known about the exact relationship between school-related problems and placement outcomes (De Swart et al., 2012; Pritchett, Gillberg, & Minnis, 2013). Nevertheless, school-related problems are associated with level of psychosocial problems (Barber & Delfabbro, 2002; Karen Shelly, James, & Donald, 1996), and problems in school performance seem to negatively affect both short- and long-term outcomes. The findings of our empirical study showed that residentially placed children have significantly more school-related problems (83%) compared to children in family-based settings. These findings most likely have to do with selection bias, as children with such problems are generally referred to this type of care because of the (usual) availability of an incorporated school. However, this does not apply to family-style group care, while two-thirds of children placed in such care also demonstrated problems in terms of school performance. Moreover, additional analysis showed that a significant number of primary school-aged children (11%) in family-style group care exhibited truancy during the first year of placement (Leloux-Opmeer, Kuiper, & Scholte, 2016). In this context, we therefore agree with Karen Shelly et al. (1996) and Akister et al. (2010) that efforts are needed to increase knowledge concerning the prevalence of school problems experienced by children in care and to monitor children's school performance during placement, as both will contribute to success and well-being in adult life.

Finally, future research should focused on other outcome measures (or combined thereof) beyond solely a child's psychosocial development, although this measure is considered to be an important determinant in the success of out-of-home placement (Li et al., 2017; Goemans et al., 2015; Minty, 1999). It is likely that a more comprehensive impression of both the vulnerability and resilience of an out-of-home placed child can be obtained by combining several outcome measures. Suggestions include, for example, the development of family

functioning, the development of school functioning, program completion, or type of discharge setting.

General Conclusion

Recently, efforts have been made to reduce the use of specialized (out-of-home) care services in order to limit the ever-increasing costs associated with them and to increase the quality of the remaining specialized care services. In pursuing this endeavor, the findings of our study plead for a shift towards a collaborative matched-care model for allocation to out-of-home care services. To achieve an optimally suitable set of intervention(s), allocation should firstly be based on an integral risks and needs assessment in all developmental contexts at the time of admission. In addition, both a deepening and broadening of the current youth care services are essential by means of a coordinated collaboration both within the various types of 24-h care services and between different sectors for child and adult services. Only then the charted risks and needs can be matched to a personalized set of combined interventions for both a child and his or her family. During this matching process, any of the possible negative side-effects of a particular type of 24-h setting should also be taken into account. Finally, we strongly recommend monitoring both short- and long-term placement outcomes in order to be able to constantly retune decision-making processes. Taking all of these steps, from integral assessment to matching to monitoring and to feedback processes, will result in a data-driven evidence-based approach to clinical decision-making and will likely yield a more efficient and effective out-of-home care services.

The plea for matched care implicitly argues against the (rigidly used) least restrictive policy. In our opinion such a policy will not contribute to the aim of increasing the effectiveness and efficiency of (24-h) youth care services. Not “the least restrictive” but “as intensive and restrictive as necessary” should be the credo.

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SUMMARY IN DUTCH

(NEDERLANDSE SAMENVATTING)

MIJ EEN ZORG?!
Startkenmerken en kinderontwikkeling in verschillende 24-uurs settings

INTRODUCTIE

Ieder kind heeft recht op veilige, ondersteunende en verzorgende opvoedingssituatie waarin het zich zo optimaal mogelijk kan ontwikkelen. Soms komt een gezonde ontwikkeling echter in het gedrang door onveilige of ongunstige kind- en gezinsomstandigheden. Als intensieve (gezins)ondersteuning onvoldoende effectief is gebleken, kan een (tijdelijke) uithuisplaatsing van het kind een passend alternatief zijn. De drie hoofdzorgvormen bij uithuisplaatsing zijn pleegzorg, gezinshuizen en residentiële zorg. Pleegzorg en gezinshuizen bieden beide een gezinssetting, wat doorgaans de voorkeur heeft, omdat het kind daar meer mogelijkheden heeft om stabiele, continue gehechtheidsrelaties aan te gaan met de vervangende opvoeders. Daarnaast lijkt een gezinssetting het meest op een biologische gezinssituatie.

Uit onderzoek is gebleken dat tenminste 20% van de uithuisgeplaatste kinderen onvoldoende profiteert van de plaatsing. Samen met de almaar stijgende kosten van jeugdzorgvoorzieningen en de versnippering van jeugd- en opvoedhulp, was dit reden om het jeugdzorgstelsel in Nederland te wijzigen. Op 1 januari 2015 werd de nieuwe Jeugdwet van kracht, die zowel een *transitie* van de centrale taken en verantwoordelijkheden van het Rijk en Provincies naar gemeenten (decentralisatie) omvat, als een *transformatie* in de organisatie en werkwijze van jeugdzorgdiensten. Met deze stelselwijziging wordt beoogd (1) meer nadruk te leggen op preventieve en ambulante (thuis)hulp en het versterken van de eigen kracht van het gezin en hun netwerk, (2) vermindering van het gebruik van specialistische jeugdzorg en (3) verbetering van de effectiviteit van de resterende (specialistische) jeugdzorg.

Bij uithuisplaatsing heeft pleegzorg als niet-intensieve 24-uurs gezinssetting sterk de voorkeur. Pas als blijkt dat met deze hulp de ontwikkeling van het kind onvoldoende kan worden bijgestuurd, wordt opgeschaald naar een intensievere vorm van 24-uurs hulp. De toewijzing van de zorg verloopt dus via een getrapt model ("stepped-care model"). Het nadeel van deze getrapte werkwijze is echter dat dit kan resulteren in lange hulptrajecten, toename van (ontwikkelings)problemen bij het kind en voortijdige uitval als de eerst gekozen zorg te licht bleek voor de aanwezige problemen. Verondersteld wordt dat de efficiëntie en effectiviteit van 24-uurs zorg verbeterd kan worden door de kind- en gezinskenmerken bij aanmelding te matchen aan de best passende vorm van 24-uurs zorg. Dit wordt ook wel het matching model genoemd ("matched-care model"). Om te komen tot een dergelijk model is allereerst kennis nodig van de risicovolle kind- en gezinskenmerken van uithuisgeplaatste kinderen bij de start van de plaatsing in een van de zorgvormen bij uithuisplaatsing en de rol die deze startkenmerken hebben bij de ontwikkeling van het kind tijdens de plaatsing. Door vervolgens te onderzoeken welke startkenmerken gerelateerd zijn aan een gunstige dan wel ongunstige ontwikkeling van het kind, wordt inzichtelijk welke factoren (positief dan wel negatief) bijdragen aan de ontwikkeling van het kind tijdens de plaatsing. Deze factoren kunnen gebruikt worden als bouwstenen voor besluitvorming(sprocessen) bij uithuisplaatsing en voor onderbouwing van de keus voor aanvullende therapieën tijdens de plaatsing. Dit

vergroot de kans op het bieden van de meest effectieve zorg in de gegeven kind- en gezinsomstandigheden.

Het hoofddoel van het huidige onderzoek is om bij te dragen aan de ontwikkeling van een effectievere (gematchte) wijze van zorgtoewijzing bij uithuisplaatsing passend binnen de kaders en doelstellingen van de huidige transformatie van de jeugdzorg. Hiertoe zijn allereerst de typerende kind- en gezinskenmerken bij de start van de plaatsing in een van de drie hoofdzorgvormen in kaart gebracht met literatuuronderzoek (hoofdstuk 2). Vervolgens zijn de typerende doelgroepkenmerken van 200 Nederlandse uithuisgeplaatste basisschool kinderen in een van de drie hoofdzorgvormen onderling vergeleken in een empirisch onderzoek (hoofdstuk 3). Daarnaast is de psychosociale ontwikkeling die de uithuisgeplaatste kinderen gedurende het eerste jaar van plaatsing hebben doorgemaakt in de drie zorgvormen onderling vergeleken in een empirisch onderzoek (hoofdstuk 4). Tot slot zijn de typerende doelgroepkenmerken die in het empirisch onderzoek naar voren kwamen, gerelateerd aan de psychosociale ontwikkeling (gunstig of ongunstig) van het kind. Dit resulteerde in een set van startkenmerken die kunnen dienen als bouwstenen om in de besluitvorming bij uithuisplaatsing een optimale match te maken met een best passend zorgaanbod (hoofdstuk 5).

In deze samenvatting worden de belangrijkste bevindingen van het onderzoek en de implicaties voor praktijk en beleid beschreven, evenals enkele aanbevelingen voor vervolgonderzoek.

BELANGRIJKE BOUWSTENEN VOOR BESLUITVORMING BIJ UITHUISPLAATSING

Kindkenmerken gerelateerd aan de mate van psychosociale ontwikkeling

Wat betreft kindkenmerken bij de start van de plaatsing bleken vijf kindfactoren gerelateerd aan de mate van psychosociale ontwikkeling. Allereerst bleek *de kwaliteit van de gehechtheidsontwikkeling* een belangrijke bouwsteen voor besluitvorming bij uithuisplaatsing. Zoals verwacht kwam een reactieve hechtingsstoornis (RAD) bij pleegkinderen het minst voor (15%) (hoofdstuk 3). Wel bleek uit aanvullende analyses dat pleegouders bij de helft van de pleegkinderen (sub)klinische kenmerken van sociaal-emotionele onthechting signaleerden bij de start van de plaatsing, waarbij deze kenmerken gerelateerd bleken aan een ongunstige psychosociale ontwikkeling in deze setting. In gezinshuizen was een substantieel deel van de kinderen (een derde) gediagnosticeerd met RAD en lag het klinische niveau van sociale en emotionele onthechting significant hoger dan bij residentieel geplaatste kinderen. Denkbaar is dat dit gerelateerd is aan de lange hulpverleningsgeschiedenis voorafgaand aan de plaatsing in een gezinshuis (gem = 5.4 jaar, SD = 2.3 jaar). De aanwezigheid van ernstige sociale en emotionele onthechting was gerelateerd aan een ongunstige psychosociale ontwikkeling in deze setting. In de residentiële setting vertoonden de kinderen weliswaar in mindere mate signalen van sociale en emotionele onthechting, maar ook daar was een derde gediagnosticeerd met RAD. Om kinderen snel en succesvol door te plaatsen naar een gezinsgerichte setting is het noodzakelijk de aanwezigheid van hechtingstrauma's te screenen en indien aanwezig te behandelen. De screening van de kwaliteit van gehechtheidsontwikkeling in de open residentie is bovendien

belangrijk omdat aanvullende analyses aantoonden dat kinderen zonder problemen op dit gebied zich juist in deze setting ongunstig ontwikkelden op psychosociaal gebied.

Een tweede bouwsteen voor besluitvorming bij uithuisplaatsing is het *psychosociaal functioneren van het kind bij start.* Over het algemeen was de mate van psychosociale ontwikkeling bij kinderen in de drie zorgvormen onderling vergelijkbaar, ondanks de verschillen in aard, ernst en frequentie bij aanvang van de plaatsing. Specifiek binnen pleegzorg bleek op trendniveau een (gemiddelde) toename van signalen van psychosociale problemen. Dit gold met name voor pleegkinderen zonder klinische psychosociale problemen bij plaatsing. Mogelijk weerspiegelt deze trend een natuurlijke reactie op het onderbreken van de gehechtheidsrelatie met de biologische ouders wat de vraag oproept of voor deze kinderen (zeer) intensieve kind- en gezinshulp in plaats van een uithuisplaatsing een beter alternatief zou zijn geweest. In gezinshuizen rapporteerden gezinshuisouders zowel bij start als na een jaar (zeer) ernstige signalen van psychosociale problemen bij de geplaatste kinderen, ondanks de lichte verbetering in het emotionele functioneren gedurende het eerste jaar. Dit combinerend met de eerder genoemde ernstige signalen van sociale en emotionele onthechting bij kinderen in gezinshuizen indiceert dat vooral binnen deze setting gezinshuisouders extra ondersteuning nodig hebben om deze problemen te hanteren.

Een derde bouwsteen voor besluitvorming bij uithuisplaatsing is de *aanwezigheid van psychiatrische problemen bij het kind* bij plaatsing. Hieronder valt bijvoorbeeld de aanwezigheid van een depressie, een angst- of gedragsstoornis of een posttraumatische stressstoornis. Zoals verwacht op grond van literatuur, waren psychiatrische problemen het meest aanwezig bij residentieel geplaatste kinderen. Aanvullende analyses toonden echter aan dat in gezinshuizen zes keer vaker (59%) een psychiater werd geconsulteerd dan in residentie (11%). Gezien de negatieve relatie tussen de aanwezigheid van psychiatrische problematiek en de psychosociale ontwikkeling in open residentie wordt met name voor deze setting geadviseerd om de aanwezigheid van onderliggende psychiatrische problematiek bij start te onderzoeken en om nauwe samenwerking aan te gaan met de geestelijke gezondheidszorg om deze problematiek effectief te kunnen behandelen.

De laatste twee bouwstenen binnen de kindcontext betreffen *leeftijd bij plaatsing* en *geslacht.* Alhoewel deze twee bouwstenen verschillen van de overige drie omdat ze intrinsiek onbehandelbaar zijn, zijn het wel belangrijke factoren bij de afweging van de plaatsingsopties. Wat betreft geslacht blijkt bijvoorbeeld dat vooral meisjes zich gunstig ontwikkelen in een gezinshuis. Dit impliceert dat bij plaatsing van een jongen in een gezinshuis de psychosociale ontwikkeling extra gemonitord dient te worden. Voor leeftijd bij plaatsing geldt dat een pleegzorgplaatsing met name bijdraagt aan een gunstige psychosociale ontwikkeling bij jonge basisschool kinderen (eind onderbouw). Bij plaatsing van oudere basisschool kinderen (begin bovenbouw) in pleegzorg wordt daarom geadviseerd de psychosociale ontwikkeling extra te monitoren om tijdig bij te kunnen sturen met aanvullende ondersteuning en behandeling aan de pleegouders en het pleegkind.

Gezinskenmerken gerelateerd aan de mate van psychosociale ontwikkeling

Binnen de startkenmerken in de gezinscontext bleken twee gezinsfactoren gerelateerd aan de mate van psychosociale ontwikkeling van het kind. Allereerst is *een geschiedenis van kindermishandeling* aangemerkt als bouwsteen voor besluitvorming bij uithuisplaatsing

gezien de sterke relatie met de ontwikkeling van trauma-gerelateerde stoornissen. Daarnaast heeft mishandeling ernstige en langdurige gevolgen voor de ontwikkeling van het kind en wordt het vaak overgedragen van generatie op generatie (intergenerationele overdracht). Bij pleegkinderen kwam een geschiedenis van kindermishandeling het meest voor (90%). Meestal betrof dit verwaarlozing (60%), wat gerelateerd lijkt aan de hoge prevalentie van ouderproblemen als psychiatrische problematiek en materiële problemen in deze setting (hoofdstuk 2 en 3). Opvallend genoeg was de aanwezigheid van een geschiedenis van kindermishandeling zowel gerelateerd aan een gunstige als aan een ongunstige psychosociale ontwikkeling bij pleegkinderen. Waarschijnlijk komt dit omdat het gebruikte construct meerdere typen van mishandeling omvatte (fysieke en emotionele mishandeling, fysieke en emotionele verwaarlozing en seksueel misbruik), waarbij elke vorm zijn eigen specifieke gevolgen heeft voor de ontwikkeling van het kind. De hoge prevalentie van een geschiedenis van kindermishandeling benadrukt in ieder geval de noodzaak om de aanwezigheid van trauma-gerelateerde stoornissen te onderzoeken en te behandelen.

Ten tweede bleek de *kwaliteit van de opvoedrelatie tussen het geplaatste kind en de vervangend opvoeder* een belangrijke bouwsteen voor het vergroten van de effectiviteit van de geboden hulp. De kwaliteit van de (vervangende) opvoedrelatie weerspiegelt de kwaliteit van de gehechtsheidsontwikkeling van het kind en is gerelateerd aan een leeftijdsadequate psychosociale ontwikkeling. Op hoofdlijnen was de kwaliteit van de opvoedrelatie met de vervangende opvoeders vergelijkbaar in alle drie de zorgvormen. In eerste instantie leek het echter tegenstrijdig dat juist in pleegzorg op enkele specifieke opvoeddimensies meer problemen werden gerapporteerd aan het begin van de plaatsing. Pleegouders rapporteerden klinisch-hoge mate van conflicten in de opvoedrelatie en in subklinische mate signalen van aanklampingsgedrag van het pleegkind. Dit lijkt haaks te staan op het lage percentage kinderen met hechtingsproblemen bij plaatsing in deze setting. Een alternatieve verklaring voor deze bevindingen kan echter zijn dat deze problemen aan het begin van de plaatsing juist een gezonde reactie op de scheiding met de biologische ouders weerspiegelt, temeer omdat een jaar na plaatsing de opvoedrelatie met de pleegouder is hersteld en de psychosociale ontwikkeling gunstig verliep. Dit geldt echter alleen in situaties waarbij sprake was van milde problemen in de opvoedrelatie. Het is dus van belang de kwaliteit van de vervangende opvoedrelatie te monitoren om tijdig aanvullende behandeling toe te kunnen kennen tijdens plaatsing als er sprake is van ernstige problemen op dit gebied.

PRAKTISCHE IMPLICATIES VOOR DE TRANSFORMATIE VAN HET JEUGDSTELSEL

Om de efficiëntie en effectiviteit van 24-uurs zorg te verbeteren, is een transformatie nodig van het huidige getrapte toewijzingsmodel bij uithuisplaatsing bestaande uit opschaling van lichte naar zware zorg, naar een op matching gebaseerde werkwijze. Bij zo'n werkwijze wordt de zorgtoewijzing direct afgestemd op de aanwezige risicovolle kind- en gezinsomstandigheden. Naar onze mening zijn drie stappen noodzakelijk om te kunnen transformeren naar een matching model voor zorgtoewijzing. Deze stappen zullen onderstaand worden toegelicht.

Stap 1: Implementatie van integrale risico- en behoefte analyse

Allereerst is implementatie van integrale risico- en behoefte analyse nodig bij de start van het traject naar uithuisplaatsing. Pas als de specifieke kind- en gezinsomstandigheden bij start in kaart zijn gebracht en bepaald is welke daarvan behandeling behoeven om te komen tot een gunstige behandeluitkomst, kan een optimale match worden gemaakt met een best passende (set van) interventie(s). In deze integrale startdiagnostiek zouden in ieder geval de zeven bovengenoemde factoren onderzocht moeten worden, gezien hun relatie met de uitkomsten van een uithuisplaatsing en het (negatief) cumulatief effect van de aanwezigheid van meerdere van deze factoren.

Stap 2: Het matchen van het best passende zorgaanbod

Om het best passend zorgaanbod samen te stellen, zijn een aantal randvoorwaarden van kracht. Allereerst is *meer evidence-based kennis nodig over de effectiviteit* van de verschillende zorgvormen met aanvullende behandeling in relatie tot de specifieke kind- en gezinskenmerken bij de start van de plaatsing. Op hoofdlijnen wijzen de empirische onderzoeksresultaten erop dat pleegzorg in de huidige jeugdzorgcontext het meest effectief is bij jonge mishandelde basisschool kinderen met enkelvoudige matige individuele problemen. Plaatsing in een gezinshuis sluit het best aan oudere meisjes in de basisschoolleeftijd, zonder hechtingsproblemen en met psychiatrische problemen die niet samen gaan met ernstige emotionele- en gedragsproblemen. Open residentie is het meest effectief bij oudere mishandelde en sociaal-emotioneel onthechte basisschool kinderen met ernstige psychosociale problemen die niet voortkomen uit een specifieke psychiatrische stoornis en waarbij een intensieve en integrale behandeling gevraagd wordt. Vervolgonderzoek zal deze typeringen nader moeten verfijnen.

Een tweede randvoorwaarde voor een goede matching is de *expliciete afweging van de nadelige gevolgen van een bepaalde zorgvorm of van een uithuisplaatsing* bij de uiteindelijke keus voor een bepaalde interventie. Zo wijzen onze onderzoeksresultaten erop dat kinderen met een gezonde gehechtheidsontwikkeling waarschijnlijk meer baat hebben bij een gezinssetting, terwijl kinderen met (ernstige) hechtingstrauma's, ernstige psychosociale problemen en schoolgerelateerde problemen mogelijk eerst een intensieve integrale behandeling behoeven alvorens ze zich goed kunnen ontwikkelen in een (vervangende) gezinssetting. Ook indiceren de onderzoeksresultaten dat juist bij psychosociaal gezond functionerende kinderen uit risicovolle gezinsomstandigheden de ontwikkeling tijdens de plaatsing ongunstig verloopt en kan afgevraagd worden of een intensieve (ambulante) gezinsinterventie mogelijk een beter alternatief zou zijn geweest.

Een derde randvoorwaarde voor het samenstellen van het best passende zorgaanbod is een *gecoördineerde samenwerking binnen de jeugdzorgsectoren.* Met een dergelijke verdieping van het zorgaanbod kunnen de pluspunten van elk type zorg worden gecombineerd. Te denken valt aan het combineren van de pluspunten van zorgvormen door bijvoorbeeld de stabiele verzorging van gezinshuisouders in een gezinshuis te bieden op een residentieel terrein, waar direct beschikking is over speciaal onderwijs en allerlei vormen van therapie. Of het intensiveren van bestaande zorgvormen zoals de (her)invoering van behandelpleegzorg.

Tot slot is naast een verdieping ook een verbreding van de jeugd- en opvoedhulp nodig in de zin van *gecoördineerde samenwerking tussen zorgsectoren.* Dit betreft niet alleen

samenwerking met verschillende jeugdzorgdiensten, maar ook samenwerking met verschillende soorten volwassenzorg zoals schuldhulpverlening en geestelijke gezondheidszorg voor volwassenen. Hoewel het combineren van interventies uit verschillende zorgsectoren voor kind en gezin op korte termijn duurder of minder efficiënt lijkt, zal dit naar verwachting de effectiviteit en efficiëntie van de jeugd- en opvoedhulp op lange termijn vergroten. Het behandelen van zowel het kind als het gezin sluit daarnaast expliciet aan bij de doelstellingen van de transformatie van de jeugdzorg waarin (onder andere) beoogd wordt de eigen kracht van het gezin te versterken en daarmee de kans op een succesvolle thuisplaatsing te vergroten, of een uithuisplaatsing zelfs te voorkomen.

Stap 3: Routinematig het effect van de interventie(s) monitoren

Een derde stap om de effectiviteit van de ingezette (set van) interventie(s) te verhogen, is om *het korte- en lange termijn effect te monitoren,* ten einde bij te kunnen sturen. Bovendien kunnen de effecten van de interventies gerelateerd worden aan subgroepen cliënten, zodat er een meer gedifferentieerd beeld ontstaat welke interventie in welke omstandigheden bij wie het beste resultaat biedt.

AANBEVELINGEN VOOR VERVOLGONDERZOEK

Uniek in dit onderzoek was de onderlinge vergelijking van de startkenmerken en mate van psychosociale ontwikkeling van uithuisgeplaatste kinderen gedurende het eerste jaar van plaatsing in de drie hoofdzorgvormen van 24-uurs zorg. Vanwege het quasi-experimentele karakter van dit onderzoek en de onevenredige verdeling in aantal respondenten in de drie onderzochte zorgvormen dienen de resultaten van dit onderzoek echter wel met enige voorzichtigheid geïnterpreteerd te worden. Op grond van de onderzoeksresultaten worden de volgende aanbevelingen voor vervolgonderzoek gedaan.

Allereerst wordt aanbevolen nader te onderzoeken wat de specifieke invloed is van de subtypen van kindermishandeling (verwaarlozing, mishandeling en misbruik) op de mate waarin een mishandeld kind zich ontwikkelt binnen de verschillende zorgvormen. Deze differentiatie kan bijdragen aan het eerder signaleren van behandelbehoeften bij specifieke (risico)subgroepen en vergroot de kans op effectievere zorgtoewijzing naar een bepaalde zorgvorm of naar aanvullende behandeling.

Ten tweede wordt geadviseerd de ontwikkeling van psychosociaal gezonde kinderen uit disfunctionele biologische gezinnen die in een pleeggezin worden geplaatst te vergelijken met de ontwikkeling van kinderen met soortgelijke achtergrond die een vorm van intensieve ambulante gezinsbehandeling krijgen. De huidige empirische bevindingen lijken namelijk te indiceren dat specifiek deze (diagnostische) subgroep kinderen zich in een pleeggezin ongunstig ontwikkelde. Dit zou kunnen beteken dat voor deze subgroep kinderen het onderbreken van de gehechtheidsrelatie door de uithuisplaatsing zwaarder weegt dan de ongunstige gezinsomstandigheden thuis.

Een derde aanbeveling voor toekomstig onderzoek heeft betrekking op de rol van het schoolfunctioneren op de uitkomsten van de plaatsing en visa versa. Er is momenteel weinig bekend over de exacte relatie tussen schoolgerelateerde problemen (bijv. IQ, leerproblemen, motivatieproblemen, spijbelen, conflicten) en de uitkomsten van een uithuisplaatsing. De

huidige onderzoeksbevindingen tonen in ieder geval aan dat er bij de start van de plaatsing vaak weinig informatie is over dit onderwerp, vooral voor kinderen in gezinshuizen. In de literatuur is wel bekend dat het schoolfunctioneren en -prestaties een belangrijke invloed hebben op korte en lange termijn, bijvoorbeeld wat betreft het hebben en houden van een baan en het latere inkomensniveau. Dit benadrukt des te meer het belang om kennis over de prevalentie van schoolgerelateerde problemen van uithuisgeplaatste kinderen te vergroten en om de schoolprestaties tijdens de plaatsing te monitoren.

Tot slot zou toekomstig onderzoek zich kunnen richten op andere of gecombineerde uitkomstmaten dan alleen het psychosociale functioneren van het geplaatste kind, alhoewel deze maat in de literatuur overigens wel beschouwd wordt als een van de belangrijke determinanten van het succes van een plaatsing. Suggesties voor uitkomstmaten die gecombineerd zouden kunnen worden met de mate van psychosociale ontwikkeling zijn de ontwikkeling van het school- en gezinsfunctioneren, het al dan niet gepland beëindigen van een plaatsing of het type vervolgplaatsing (thuis of een andere zorgvorm).

SLOTCONCLUSIE

In het streven naar een effectiever en efficiënter gebruik van jeugdzorgvoorzieningen wordt specifiek voor (specialistische) 24-uurs zorg gepleit voor de invoering van een collaboratief matching model voor zorgtoewijzing. Om tot een optimaal passende (set van) interventie(s) te komen, dient de zorgtoewijzing gebaseerd te zijn op een integrale risico- en behoefte analyse bij start. Daarnaast is zowel verdieping als verbreding van de huidige jeugd- en opvoedhulp diensten noodzakelijk. Alleen dan kunnen de in kaart gebrachte risico's en behoeften daadwerkelijk worden gematcht met een gepersonaliseerde set van interventies voor kind en gezin. Tijdens deze matching dienen eveneens expliciet de eventuele negatieve bijwerkingen van de beoogde interventie(s) afgewogen te worden. Tot slot is het van belang zowel de korte- als lange termijn effecten van de ingezette interventie(s) te monitoren om tijdig bij te kunnen sturen.

Het allerbelangrijkste voor de invoering van een dergelijk toewijzingsmodel is echter een paradigmaverschuiving binnen het jeugdzorgstelsel, van “zo licht als mogelijk” naar “zo intensief als nodig”.

ACKNOWLEDGEMENTS

(DANKWOORD)

DANKWOORD

Alhoewel ik dacht dat een promotietraject vooral zou gaan over kennis en kunde, gaat het meer nog over doorzettingsvermogen, incasseringsvermogen, (zelf)vertrouwen en flexibiliteit. Ik ben dankbaar dat ik de kracht kreeg het traject tot een goed einde te brengen. Velen liepen tijdens deze reis een stukje (of helemaal) met me mee, en droegen bij aan het uiteindelijk resultaat. Een aantal van hen wil ik graag in het bijzonder noemen.

Allereerst mijn dank aan alle jeugdigen, ouders, verzorgers, pleegouders, gezinshuis-ouders, groepsleiders en gedragswetenschappers binnen en buiten Horizon, die mee wilden werken aan het onderzoek. Zonder onderzoeksdata geen proefschrift. Speciaal dank aan Yolinda Assenberg, die met grote nauwkeurigheid een tijd lang de dataverzameling en dataverwerking verzorgde. Ook nadrukkelijk dank aan de organisaties TriviumLindenhof, Stek, Jeugdformaat, Driestroom en Kompaan en de Bocht, die met hun deelname ervoor zorgden dat ik de subgroep gezinshuizen kon behouden in mijn onderzoek. Uiteraard ook dank aan de medewerkers binnen en buiten Horizon die op andere wijze bij hebben gedragen aan het proefschrift: door mee te denken, expertise te delen of mijn onderzoek onder de aandacht te brengen.

Naast participanten zijn er voor een promotietraject ook tijd, ruimte en financiële middelen nodig. Daarom ben ik dank verschuldigd aan de leden van de Stichting Gereformeerd Burgerweeshuis van Rotterdam, die ervoor zorgden dat het traject financieel mogelijk werd. Ook dank aan mijn werkgever Horizon Jeugdzorg en Onderwijs, en in het bijzonder Hans du Prie, die (eerder dan ik) zag dat ik wel een uitdaging kon gebruiken en mij de mogelijkheid gaf op geheel (eigenwijze) eigen wijze dit traject te doorlopen.

Verder ben ik erg dankbaar voor de positieve en geduldige, onmisbare ondersteuning van mijn promotiebegeleiders, ieder met zijn/haar eigen rol. Evert Scholte, je enorme deskundigheid en nauwgezetheid, samen met de laagdrempeligheid in het contact, maakten dat de samenwerking erg prettig was. Chris Kuiper, je beloofde me door dit langdurige proces heen te trekken: dat heb je met je onvermoeibare toewijding en vertrouwen ruimschoots waargemaakt. Hanna Swaab, bedankt voor het faciliteren van mijn promotietraject. Dat we elkaar wat minder vaak zagen, heb ik vooral opgevat als blijk van vertrouwen.

Lieve collega's van BKO, wat fijn dat ik zowel mijn frustraties als successen met jullie mocht delen, dat jullie met me meedachten en met me meeleefden, bijvoorbeeld tijdens mijn allereerste internationale congres waar ik weliswaar alleen heen ging, maar me niet alleen voelde. Bedankt daarvoor.

Lieve (schoon)ouders, familie en vrienden, ieder die op welke manier dan ook meeleefde tijdens het promotietraject, de moeite nam er iets van te snappen, zich inleefde in het proces of steun bood op een of andere manier, bedankt.

En tot slot, Ronald, lieverd, zonder jou had ik het zeker niet gered. Samen besloten we dat ik de uitdaging van een promotietraject aan zou gaan, niet wetende dat het (gezins)leven al een grote uitdaging voor ons in petto had. Je doet je naam eer aan, je bent mijn rots. Samen zijn we sterk, luv you!

CURRICULUM VITAE

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Harmke Leloux-Opmeer was born on September 26th 1979 in Almelo, The Netherlands. After completing her secondary education (VWO) at ISW ’s-Gravenzande in 1997, she studied Social Pedagogical Care at Ichthus University of Applied Science in Rotterdam. After graduation in 2001, she studied at the department of Clinical Child and Adolescent Studies at Leiden University, and obtained her Masters degree in Social Science in 2005. During this, she had several (side) jobs as group worker in child day-care, care for disabled children and adults, and specialized home care in families with parents with individual problems. From July 2005 until the end of 2008, Harmke worked as an on-call sociotherapist in child mental health day care at Curium. In addition, she started in 2005 as policy-maker and researcher at Horizon Youth Care and Special Education. Main aim in this job is managing or conducting scientific research for advising the Board of Directors and Management in optimizing youth care services and special education, Additionally, Harmke is part of regional or national project groups as senior researcher.

In 2013 she started her PhD project at the Graduated School of Social and Behavioral Sciences. Main aim of this study was linking baseline characteristics of children placed in the three main types of out-of-home care (foster care, family-style group care, and residential care) to the level of psychosocial development in order to contribute to the development of decision-making strategies for allocation to out-of-home care.

LIST OF PUBLICATIONS

List of publications

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Who cares?!

The World Health Organization recently estimated that in Europe alone 117 million children suffer from maltreatment or other adverse childhood experiences. Some of these children need to be placed in (24-h) settings for out-of-home care, such as foster care, family-style group care, and residential care. However, children do not always benefit from these services, as suggested by the substantial numbers of children repeatedly experiencing placement breakdowns.

Aim of this research is to increase the effectivity and efficiency of out-of-home care services. For this purpose, typical baseline child and family characteristics of out-of-home placed children were linked to children's development in the various 24-h settings. This knowledge both can provide building blocks for the development of sound decision-making strategies for referral to a certain type of out-of-home care and provide insight into which child and family factors need additional treatment during placement. Together, this increases the likelihood that children for whom (temporary) out-of-home placement is inevitable will receive optimal services with regard to their developmental needs. The research findings have been translated into three fundamental steps to transform the current stepped-care method for allocation decisions into a collaborative, effective, and matched-care model for allocation.