The handle http://hdl.handle.net/1887/26887 holds various files of this Leiden University dissertation

**Author:** Werner, Claudia Denise  
**Title:** Carefree in child care? : child wellbeing, caregiving quality, and intervention programs in center-based child care  
**Issue Date:** 2014-06-18
CHAPTER 1

General introduction
Chapter 1

General introduction

Child care services support millions of families and enable many parents with young children to take part in the labor market (Organization for Economic Co-operation and Development; OECD, 2013). The use of center child care in Western countries has increased over the last three decades, and is nowadays the most frequently used type of non-parental care for children aged zero to four (OECD, 2013). The aim of the current dissertation is to shed more light on indicators of child care quality in center child care and to answer the question whether narrow-focused caregiver interventions are effective in improving child care quality.

Since research consistently has shown that the parent-child relationship is not necessarily negatively affected by the use of non-parental care in general (Ahnert, Pinquart, & Lamb, 2006; Goossens & Van Ijzendoorn, 1990; Howes, Rodning, Galluzzo, & Myers, 1988; Love et al., 2003; Spieker, Nelson, Petras, Jolley, & Barnard, 2003), most parents consider it no longer controversial to make regular use of center child care. What is more, when the quality of care is high, child care attendance can even be beneficial for the child’s cognitive and language development (Dearing, McCartney, & Taylor, 2009). It has been shown that when taking into account moderators and contextual factors such as child age, type of care, hours in care and social-economic status of the families, high quality care has advantages for child development (Belsky, 2006; McCartney et al., 2010; Vandell et al., 2010). However, when the quality is low, children’s development can be negatively affected in the short term as well as in the long term, as was evidenced in the groundbreaking longitudinal study by the National Institute for Child Health and Human Development Early Child Care Research Network (NICHD ECCRN) in the U.S.A. (Vandell, Belsky, Burchinal, Steinberg, & Vandergrift, 2010). Before answering the question how low child care quality can be improved, we first need to define the concept of child care quality more clearly.

Defining quality of center child care

Scientists, policy makers and parents agree that high quality care can be achieved through four fundamental goals, which are providing children with a sense of security, enhancing their personal and social competence, and stimulating their socialization process (Riksen-Walraven, 2004). The extent to which a child care center succeeds in reaching these goals determines the quality of care (Riksen-Walraven, 2004). Quality of child care can further be defined in terms of distal factors and proximal factors, which contribute to achieving these four main goals. Distal factors are the more ‘structural’ aspects of the care, for instance the use of space in the room and furniture, caregiver education level, and group size. However, the most important indicators of quality in the model (see Figure 1) are formed by proximal factors: caregiver-child interactions,
peer interactions, and the interaction of the child with the physical environment (Riksen-Walraven, 2004). These proximal factors may be positively or negatively affected by distal factors: for instance more caregiver training and lower staff turnover rates are related to higher quality caregiver-child interactions (De Schipper, Tavecchio, Van Ijzendoorn, & Linting, 2003; Gerber, Whitebook, & Weinstein, 2007).

Noise as an additional indicator of child care quality
Although the model in Figure 1 provides a comprehensive picture of indicators of child care quality, we suggest combining this model with the environmental chaos theory (Evans & Wachs, 2010). This theory states that people’s physical and psychological health can be negatively affected by high levels of environmental chaos. The most important indicators of environmental chaos are noise, crowding (the number of people in one place), and chaos itself, as indicated by a lack of routines, planning of activities and order (Matheny, Wachs, Ludwig, & Philips, 1995). These indicators are highly relevant to child care settings and may be important predictors for child wellbeing (Evans & Wachs, 2010). While not yet much research has been done with regards to environmental chaos in the child care setting, in family environments high levels of noise, chaos and crowding have been associated with more frequent negative caregiver-child interactions (Evans & Wachs, 2010). Moreover, indicators of crowding, such as higher child-to-caregiver ratios

Figure 1. Model of factors that have direct or indirect effects on child wellbeing and development in center child care (Riksen-Walraven, 2004)
Chapter 1

and larger group sizes, have been shown to be related to fewer positive caregiver-child interactions (De Schipper, Riksen-Walraven, & Geurts, 2006).

A core element of environmental chaos is noise. Particularly, previous research has demonstrated high levels of noise in child care centers to be detrimental to child cognitive performance (Evans, 2006; Shield & Dockrell, 2003) and stress regulation (Evans, 2006). In home-based child care, higher noise levels have been associated with lower levels of child wellbeing (Linting, Groeneveld, Vermeer, & Van IJzendoorn, 2013). In light of the above, noise fits in well with the proximal processes described in the Riksen-Walraven model (2004). That is, on the one hand, noise results from caregiver-child interactions or peer interactions in the physical environment, but on the other hand noise may also affect these processes. Moreover, noise is likely to be influenced by distal factors such as group size, materials and space. Although the specific details regarding how to best integrate particular indicators of environmental chaos theory into the model in Figure 1 needs to be discussed further, it is clear that their associations with child care quality and child wellbeing requires more attention. In the current dissertation we therefore also investigate the association between child care quality and indicators of environmental chaos.

Our starting point is that quality of child care includes indicators at the center level, the group level, the caregiver level, and the child level, that all interact with one another in their prediction of child wellbeing. However, the indicator of child care quality that consistently has been shown to be most predictive of optimal child development is the caregiver-child relationship (Ahnert et al., 2006; Goossens & Van IJzendoorn, 1990; Howes & Smith, 1995).

Why is the caregiver-child relationship so important?
Children who attend child care depend on other caregivers than their parents for emotional support and physical care. Similar to the child in the family environment, the child in child care needs to be nurtured, supported and calmed throughout the day by a stable, sensitive caregiver. The relationship between the professional caregiver and the child is fundamental for the child’s emotion regulation, feelings of security and social development (Ahnert et al., 2006). A positive relationship can be reached through consistent sensitive caregiving, that is, professional caregivers who observe and interpret children’s signals correctly and respond to them in prompt and adequate ways (Ainsworth, Bell, & Stayton, 1974). Just like parental sensitivity in the home environment, caregiver sensitivity is a main predictor of child social-emotional development for children in child care (Ahnert et al., 2006; Goossens & Van IJzendoorn, 1990). Frequent positive caregiver-child interactions with a sensitive caregiver help children to build a secure relationship with the caregiver. In this vein, caregivers may function as attachment figures (De Schipper, Tavecchio & Van IJzendoorn, 2008), that
is, trusted persons who are available and responsive to the children when they are distressed or anxious (Bowlby, 1969). Positive relationships with sensitive caregivers are especially important for children growing up in home environments of poor quality, because these relationships may protect against adverse developmental outcomes of these home environments (Badanes, Dmitrieva, & Watamura, 2012; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2011; Vesely, Brown, & Mahatmya, 2013; Watamura, Morrissey, Philips, McCartney, & Bub, 2011). Whilst parental sensitivity and adequate quality of the home environment for child social-emotional development are fundamental (Rijlaarsdam, 2014) over and beyond child care quality (Belsky et al., 2007; Hungerford & Cox, 2006), the quality of care and sensitivity of professional caregivers are also essential. Children receiving poor quality care both at home and in their out-of-home child care are specifically at increased risk for adverse outcomes, because of the so-called double risk situation (Watamura et al., 2011). This finding implicates that one mechanism to protect these children from negative life outcomes is to improve the quality of child care. The question arises how the caregiver-child relationship and general quality in center child care may be improved.

Improving child care quality

Internationally, two types of programs have addressed the issue of improving child care quality: narrow-focus and broad-focus intervention programs. The main difference between the two types of programs is that in the broad-focus programs, also referred to as Early Childhood Education (ECE) programs, child care is viewed as an intervention in itself, aiming to provide children, especially children from disadvantaged families, with better opportunities (Hungerford & Cox, 2006). In these programs, child care curricula are often combined with home visits, parent training and child health care, thus involving multiple social environments, often in a longitudinal design. ECE programs are not so much initiatives to improve child care quality itself, but these programs merely try to enhance child cognitive and emotional development through high quality child care. Well-known ECE programs in the U.S.A. are the High/Scope Perry Preschool program (Belfield, Nores, Barnett, & Schweinhart, 2006), the Carolina Abecedarian (Campbell et al., 2008; Campbell et al., 2012), the Chicago Longitudinal School Readiness program (Jones, Bub & Raver, 2013) and Head Start (Shager et al., 2013).

In contrast, narrow-focus programs which are characterized by their relatively short-term design are often more specifically designed to improve one or two specific indicators of child care quality. In the ongoing debate on how to reach high quality child care with low costs a variety of narrow-focus programs have been developed. Many narrow-focus programs aim at improving indicators of child care quality at the child level, such as child cognitive development (for a review see Chambers, Cheung, Slavin, Smith, & Laurenzano, 2010). Other intervention programs focus on specific indicators of quality at the center
level, such as regulations regarding infection prevention (Binns & Lee, 2010), sleep safety (Moon, Calabrese, & Aird, 2008), nutrition, and physical activity (see e.g. Larsson, Ward, Neelon, & Story, 2011; Ward, Vaugh, McWilliams, & Hales, 2010). Other programs target the proximal indicators of child care quality: the caregiver-child relationship and child social-emotional wellbeing. Two well-known programs in this domain are the Incredible Years Teacher Programs (Webster Stratton, 2004), and the Tools of the Mind program (Bodrova & Leong, 1996; Diamond & Lee, 2011).

In this dissertation we provide an overview of randomized trials with narrow focus programs in child care settings. Our aim is to provide the current state-of-the-art regarding interventions in child care and to examine whether these programs succeed in improving child care quality as indicated by caregiver-child interaction and child social-emotional wellbeing. Finally, after reviewing the literature, we present two empirical studies conducted in the Netherlands. To provide some context to these studies specific characteristics of Dutch child care services and child care quality are presented next.

Child care in the Netherlands
In the Netherlands, three main types of formal child care services for children under four years of age can be distinguished. The first type, center child care (in Dutch: kinderdagverblijf or kindercentrum), is an out-of-home arrangement where two or three professional caregivers are responsible for a group of maximum 16 children. Home-based child care (in Dutch: gastouderopvang), the second type, is an arrangement more comparable to the home environment: One professional takes care of a maximum of six children in her or his own home. Children may attend center care and home-based care on a part-time or full-time basis, although most children attend part time (OECD, 2013). Preschool playgroups (in Dutch: peuterspeelzaal), the third type of child care service, are part-time-only arrangements for children between 2.5 to 4 years old. Preschool playgroups were originally designed to prepare children from disadvantaged backgrounds for primary school; therefore the focus is mainly on cognitive educational goals. Group sizes are comparable to those in center child care. Recently, official initiatives have been put forward to integrate all formal care and education services for children 0 to 12 years at the organizational level as well as in a spatial sense, including center child care and preschool playgroups (Sardes, 2012; www.nji.nl). The current dissertation focuses primarily on center child care.

Although Dutch center child care took an internationally leading position in terms of quality in the early 1990s, a steep decline in general quality was observed from 1995 to 2008, leaving the Netherlands with very few centers of high quality and a majority of centers of only minimal to adequate quality (Fukkink, Gevers Deynoot-Schaub, Helmerhorst, Bollen, & Riksen-Walraven, 2013; Vermeer et al., 2008; Vermeer, 2012). Over the years, more centers of moderate and low quality have emerged. Although an
increase in average quality has been observed in the most recent child care assessment by the Netherlands Consortium for Child Care Research in 2012 (Fukkink et al., 2013), a substantial part of the centers continued to be of inadequate to moderate quality, with only a few of high quality. Moreover, the stability of quality within the centers was low (Fukkink et al., 2013), strengthening the argument that even centers of adequate to high quality should be cautiously monitored given the fact that their quality may fluctuate over the years.

Especially after formal child care was opened to the market forces with the implementation of the Dutch Child Care Act of 2005, which resulted in a large increase in the number of for-profit centers (Noailly & Visser, 2009), the quality of center care has come under scrutiny in the Netherlands. Worries about the lack of capacity to monitor all centers by local authorities and the high demand for child places have resulted in speculations about the causes of the relatively low quality level of child care in the Netherlands. More recently concerns have been raised about for-profit centers that have started to further compromise the quality of care they provide, primarily due to the economic downturn (www.fnv.nl). Until 2010 demands for child care increased steadily (Centraal Plan Bureau, 2011). However, since 2011 the financial crisis has resulted in high drop-out rates of children in child care. As a consequence of their sudden decrease in income, many child care centers were faced with bankruptcy and many of the remaining organizations are struggling to keep their staff and provide adequate care (www.fnv.nl).

The abovementioned developments are reason for concern, particularly in light of the fact that high quality child care ensuring good physical and emotional care for young children is needed in order to provide optimal child social-emotional wellbeing and cognitive development.

When we look at initiatives for quality improvement in the Netherlands, the discussion about program effectiveness is mostly limited to the preschool playgroup programs (in Dutch: Voor- en Vroegschoolse Educatie) that focus on language development and cognitive stimulation for minority children (Driessen, 2003). In center child care, programs that supposedly enhance child cognitive development and caregiver-child interaction (e.g. Kaleidoscoop, Ben ik in Beeld, Piramide, Uk & Puk; www.nji.nl) are used on a large scale, yet these programs still lack solid evidence considering their effectiveness (Meij, Mutsaers, & Penning, 2009; Rutten, 2009). Without well-designed randomized controlled trials, selection bias may obscure results, causes and effects remain unclear and a best practice approach (as opposed to an evidence based approach) leads to implementation of costly programs that may not enhance child care quality and child wellbeing at all.

An attachment-based intervention in center child care
There is a clear need for more solid effectiveness studies to intervention programs focusing on the caregiver-child relationship in center child care, internationally as well
as in the Netherlands. Therefore we designed a randomized controlled trial to test an attachment-based program that has been proven effective in various family settings and in home-based child care. The Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD, Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2008a) was originally designed to be used in families with children in the preschool age. The program aims to improve the parent-child relationship and was tested in several randomized trials in different populations. Maternal sensitivity improved as a result of the intervention for mothers with insecure attachment representations (Klein Velderman, Bakermans-Kranenburg, Juffer, & Van IJzendoorn, 2006), insensitive mothers (Kalinauskiene et al., 2009), mothers of adopted children (Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2005, 2008b), mothers with children high in externalizing behavior problems (Mesman et al., 2008; Van Zeijl et al., 2006), mothers with eating disorders (Stein et al., 2006; Woolley, Hertzmann, & Stein, 2008), and mothers of low SES at risk for maltreating their children (Negrao, Pereira, Mesman, & Soares, 2013). Groeneveld and colleagues adapted the program for use in home-based child care (VIPP-CC) and showed that the program enhanced general caregiving quality and the caregiver’s attitudes towards sensitive caregiving and limit setting (Groeneveld, Vermeer, Van IJzendoorn, & Linting, 2011). These findings support the hypothesis that this intervention method could also be suitable for use in center child care. However, as home-based care and center-based care are quite different from one another in terms of group sizes, routines and physical environment, we cannot generalize the findings by Groeneveld et al. (2011) to center child care. Therefore a randomized controlled trial to evaluate the effectiveness of the VIPP-CC in center child care is needed.

Outline of the dissertation
This dissertation begins with an overview of randomized controlled trials of narrow-focus intervention programs in child care through a meta-analysis on the effectiveness of caregiver training programs regarding child care quality outcomes at the classroom level, caregiver level, and child level in Chapter 2. Next, Chapter 3 presents the randomized controlled trial of the VIPP-CC in center child care and discusses results on caregiver sensitive responsiveness, caregiving attitudes and general quality. In the correlational study in Chapter 4 we investigate how indicators of environmental chaos in the child care centers, in particular noise, can be combined with other indicators of child care quality and how they are related to child emotional wellbeing. Finally, the findings of the meta-analysis and empirical studies are reflected upon and integrated in the theoretical framework in the general discussion in Chapter 5, where implications for practice and future research are provided.