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Video-feedback intervention in center-based child care: A randomized controlled trial

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ABSTRACT

In the current study we aimed to improve center-based child care quality with an attachment-based program: The Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline for Child Care (VIPP-CC). Professional caregivers ($N = 64$) from child care centers in urban areas in the Netherlands participated in our pretest-posttest randomized controlled trial. The VIPP-CC was effective for increased observed sensitive responsiveness in the group setting of the professional caregiver and led to a more positive attitude towards caregiving and limit setting. Post hoc analyses revealed that the intervention effect was apparent for caregiver sensitive responsiveness in structured play situations. The VIPP approach can now be expanded from the family setting to out-of–home group settings with larger groups of children and professional caregivers. This is a promising conclusion for millions of children enrolled in center child care from a very young age.

1. Introduction

Center-based child care is an important support system for parents of young children. Quality of center child care has been subject of heated debates, and most of the research efforts have concentrated on trying to describe the consequences of center care on the development of children (Love et al., 2003; Lowe Vandell, Belsky, Burchinal, Steinberg, & Vandergrift, 2010; Sylva, Melhuish, Sammons, Siraj-Blatchford, & Taggart, 2011; Votruba-Drzal, Levine Coley, Maldonado-Carreno, Li-Grining, & Chase-Lansdale, 2010). Much less research has been devoted to the improvement of quality of center care although the need for careful experimental work showing how to enhance child care quality has been emphasized by parents, professionals, and policy makers (Besharov & Morrow, 2006; Janus & Brinkman, 2010).

On average, across 40 OECD countries, one third of all children under the age of three attended professional child care in 2010. For instance, in the Netherlands, 60% of the children under three years of age were in formal child care, whereas this percentage was 43% in the US (Organization for Economic Co-operation and Development, 2013). Because the intensity of child care use varies considerably across countries, these participation rates may decrease after adjusting for intensity of use. In the Netherlands, the average number of child care use is 17 h per week (Central Bureau for Statistics, 2016), which leads to a fulltime equivalent enrollment rate of 37%. In the US full-time equivalent rates are comparable to participation rates (43%), because full-time attendance in child care is very common (Organization for Economic Co-operation and Development, 2013). These estimates include all types of professional child care: center-based care, home-based care or family-based care, and preschools. In the Netherlands regulation of child care is provided by the government, requiring minimal educational levels for professional caregivers and minimum staff-child ratios, dependent on the type of care and the age of the children.

Center-based care refers to care provided in a center with large groups of children and more than one caregiver present. Home-based care, or family-based care, is usually provided in the caregiver's home with fewer children present (a maximum of six) and one caregiver. Preschools, or playgroups, in the Dutch context are intended for children from 2 to 4 years of age; children often spend a few mornings a week in these settings. Center-based care and home-based care can provide fulltime day care for children under four years of age although most children attend these types of care part time (Central Bureau for Statistics, 2016). In the Netherlands, center-based care is the most common type of care in this age group. Seventy-one percent of all children in child care attended center-based child care in the Netherlands in 2015 (Central Bureau for Statistics, 2016). Professional caregivers in both center-based care and home-based care are legally bound to formal training. Also in other countries center-based care is the most common type of non-parental care for children in the age range of 0–3 years (Organization for Economic Co-operation and Development, 2013), which points out the possible impact of improving the quality of

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center-based child care.

In the present study we report one of the few randomized control trials aimed at enhancing quality of center child care for children aged 0–4 years. A video-feedback intervention to promote positive caregiving with an emphasis on sensitive discipline is adapted to center child care and we test the effects on professional caregiver sensitivity, professional caregiver attitudes and general child care quality.

1.1. Quality of child care

Scientists, policy makers and parents agree that high quality child care can be achieved through four fundamental goals: (1) providing children with a sense of emotional security, (2) enhancing their personal competence, (3) enhancing their social competence, and (4) 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. Quality of child care can 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 child care setting, such as the use of space in the room and furniture, play materials, professional caregiver education level, and group size (Howes, Philips, & Whitebook, 1992). However, the most important aspects of child care quality are formed by proximal factors or process quality: caregiver-child interactions, peer interactions, and the interaction of the child with the physical environment (Howes et al., 1992; Riksen-Walraven, 2004). Process quality is assessed primarily through observation and may be affected by structural aspects: for instance more professional 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). However, structural aspects are more 'fixed' because of government legislation and therefore less easily changed. In the current study, general child care quality refers to the experiences of children within the child care environment including their interactions with others, materials, and activities. Features of the physical environment (personal care, space, furniture, and physical safety) are also part of general child care quality.

In the Netherlands, repeated quality assessments in nationally representative samples of child care centers using the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford & Crier, 1998) and the Infant/Toddler Environment Rating Scale-Revised (ITERS-R; Harms et al., 1998) have shown a decrease in child care quality during the last two decades (Helmerhorst, Riksen-Walraven, Gevers Deynoot-Schaub, Tavecchio, & Fukkink, 2015; Vermeer et al., 2008). Mean quality levels were reported around 3 on a 7-point scale, representing minimum standards. This is even lower than the worldwide mean: In a recent meta-analysis (Vermeer, Van IJzendoorn, Cárcamo, & Harrison, 2016) that combined data from 23 countries an average score of nearly 4 was reported.

In the intervention that is part of our investigation, we focus on improving the core element of process quality in child care settings, that is, caregiver sensitivity.

1.2. Importance of caregiver sensitivity

For optimal social-emotional and cognitive development children need stable attachment figures that are available and responsive to them when they are distressed or anxious (Bowlby, 1969). Given the fact that many young children across western countries attend formal child care, this need extends to child care settings. A sensitive professional caregiver in the child care setting, who responds promptly and adequately to the child's signals and provides comfort and security (Ainsworth, Bell, & Stayton, 1974) may fulfill the crucial role of secondary attachment figure (Ahnert, Pinquart, & Lamb, 2006; Barnas & Cummings, 1994; Badanes, Dmitrieva, & Watamura, 2012; De Schipper, Tavecchio, & Van IJzendoorn, 2008; Goossens & Van IJzendoorn, 1990; Howes & Spieker, 2008; Vermeer & Bakermans-Kranenburg, 2008). The quality of attachment relationships between children and their professional caregivers can be predicted by caregiver sensitivity and frequency of interactions (De Schipper et al., 2008). Ahnert et al. (2006) suggested in their meta-analysis that 'group sensitivity', directed at the group of children, but not caregiver sensitivity directed at the individual child, is predictive of the child's attachment security towards the professional caregiver.

Thus, an intervention program involving professional caregiver training may be effective in improving caregiver sensitivity, and, to a lesser extent, general child care quality. Only few of the many intervention programs in child care targeting caregiver-child interactions through caregiver training have been tested in randomized controlled trials (Besharov & Morrow, 2006; Werner, Linting, Vermeer, & Van IJzendoorn, 2016). The focus of interventions is often school readiness or child behavior, but not the caregiver-child (attachment) relationship. In the current study, we tested the effectiveness of an attachment-based intervention that was originally developed for parents.

1.3. Aims and contents of the current intervention

There is a need for more experimental studies on the effectiveness of intervention programs focused on the professional caregiver-child relationship in center child care, internationally as well as in the Netherlands (Werner et al., 2016). Therefore, we designed a randomized controlled trial to test an attachment-based program that has evidence to support effectiveness in various family settings and in home-based child care (Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2014). The Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD, Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2008a) was designed to be used in families with children in the preschool age and can be used for children zero to six years old. The program aims to improve the parent-child relationship and by providing personal video-feedback on sensitive responsiveness in daily situations as well as the use of sensitive discipline in challenging caregiver-child interactions. The program elaborates on four themes regarding sensitivity: (1) recognizing the child's exploration versus attachment behavior, (2) recognizing the child's signals, which is accomplished by taking the child's perspective through the technique 'speaking for the child', (3) explaining the relevance of prompt and adequate response to the child's signals, and (4) sharing emotions. In addition, four themes of sensitive disciplining are addressed: (1) using inductive discipline and distraction methods, (2) using positive reinforcement, (3) giving sensitive time-outs, and (4) showing empathy towards the child in disciplining situations. Starting point are the actual behaviors of the child and parent on the videotape. By watching child behavior together with the parent the video-feedback intervention provides opportunities to practice observational skills and to reinforce sensitive behaviors (for more information, see Juffer et al., 2008a). The program consists of six biweekly visits of approximately 1.5 h that are carried out according to an elaborate protocol. The last two visits, so-called 'booster sessions' are used to repeat the themes of all previous sessions.

1.4. VIPP-SD: evidence base

The VIPP-SD 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; Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 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