

Critical Review:
What factors affect social development in children attending child-care?

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This critical review examines the evidence surrounding child-care and the factors that impact children's social development. Study designs consist of cohort studies, longitudinal studies, and case control studies. Overall the evidence gathered from this review is relatively consistent, with some main findings, such as age of entry, and quality of care showing evidence for both prosocial behaviours and aggression. There are a number of individual variables that must be considered before making conclusive claims about social development of children cared for in child care facilities. As researchers have mentioned, children who attend child-care share common characteristics, but still remain a heterogeneous group (i.e., family differences, temperament etc.) which affects generalizability of findings. This research will assist clinicians in making appropriate recommendations to families, and allow them to be thorough and individualized. Recommendations for future research and clinical practice are provided below.

Introduction

The social development of children has been a topic of interest in research for many years (McCartney, Phillips, & Scarr, 1987). Research first focused on attachment theories and comparing children cared for in the home and those who were not, and the differences found between the two groups in regards to social development (Peterson & Peterson, 1986). Research has transitioned away from comparing these two groups and towards the individual factors that contribute to social development in children (Peterson et al, 1986). Changes in policies, economics, and family backgrounds have contributed to this shift. For instance more families consist of two working parents and more children are transitioning into kindergarten from a child-care center. There are differences in policies affecting age of entry into child care based on geographical location, differences in length of time spent in child-care (i.e., hours a day, part-time, full-time), and quality of care (McCartney et al, 1987). It is difficult to draw generalizable claims, but overall research suggest that children who attend child-care are exposed to unique experiences that promote prosocial development. Inconsistencies in evidence remain in the literature. In some findings, children who participate in child care appear to be more socially skilled than home-reared peers, which was made evident by child-care children demonstrating more advanced perspective taking skills, cooperative behavior, task orientation, and confidence in social interactions (McCartney et al, 1987). On the contrary displays of aggression, negative affect and resistance to adult requests have been reported to be more prevalent among child-care than home cared children (McCartney et al, 1987).

The current review discusses variables important for development of prosocial behaviours in children attending child-care. As a Speech Language Pathologist, we collaborate with families in providing appropriate recommendations. Understanding these factors will allow for educational opportunities and individualized recommendations to be made.

Objective

The primary objective of the current review is to identify individual child-care factors that promote development of prosocial behaviours in order to provide thorough recommendations to parents and families when considering child-care and how it can affect their child's social development.

Methods

Search Strategy

Articles related to the topic of interest were found using the following computerized databases; Medline, PsychNet, PsychINFO, and Google Scholar. Keywords used for the database were as follows:

[(Social Development) OR (Prosocial behaviours) AND (daycare) OR (homecare) OR (childcare)]

Selection Criteria

Studies selected for inclusion in the current critical review were not necessary to compare home care children with child-care children, but rather narrowed to discuss individual child-care factors. The focus of

the current review discusses the underlying individual factors that affect social development of children enrolled in child-care in order to provide a thorough review of the evidence.

Data Collection

Results of this literature search yielded seven articles congruent with the selection criteria mentioned previously. This critical paper reviews three cohort studies, two longitudinal studies, and two case control studies.

Results

Cohort Studies

McCartney, Phillips, & Scarr, (1987) completed a cohort study including 166 families (68% 2-parent households; maternal education, 6-22 years), with children ranging from 36 to 68 months. Researchers assessed the association between classrooms quality in pre-school, and kindergarten, in determining their social skills in grade one. Researchers found that experience of child care director, verbal interactions between the child and adult, and child and peers, as well as child staff ratio were associated with children's social competence. Researchers found that age of entry and time spent in child care were overall, poor predictors of children's social competence. Children who spent less time in child care (e.g., hours a day, days a week) were rated by caregivers as more anxious and dependent. Whereas those who entered child-care at an earlier age were again rated as more anxious.

An appropriate rationale was provided describing inclusion and selection criteria of participants. The quality of child-care environment was assessed in three ways. Gold standards childhood environment rating measures were used. An extensive interview was conducted with each program director, and verbal interactions between children and adults were observed using an observational coding system. Social development was also assessed through standardized questionnaires that parents and teachers filled out. Measures and methods were well described and thorough. Randomization of participants during the verbalization observations was included leading to more confidence in findings. Methods were outlined clearly and in appropriate detail for replication. Statistical power was adequate.

The statistical tests chosen were appropriate, however over half of the measures described were qualitative in nature. This is an obvious limitation due to parents as well as care-givers being susceptible to biases in their own reports of children's social competence.

Overall, the findings of this paper were compelling. The amount and quality of verbal interactions between children, adults, and peers, child-care director's experience, and ratio size all contributed to the social competence in children. This evidence contributes to the literature in assisting in explaining the specific factors that influence social development in children.

Aureli et al (1996) sought out to investigate the relationship between early child rearing practices and later play behavior through a cohort-study design. Participants were divided into two groups; home care and child-care) with a total of 40 children, ranging from 38 to 42 months of age. Children were observed during free play activities over a period of four weeks, with a total of 20 consecutive minutes. It was found that both groups (e.g., home care, child-care) played symbolically however, the child-care group was observed to play in more advanced forms and for longer durations. Emotional and organizational quality of pre-school classrooms was found to be the strongest predictor of social skills and behavior problems.

Participant eligibility criteria was specified however, a small sample size was a limitation of the study leading to decrease in generalizability of findings. Family differences were adequately controlled. Participants ranged from low to middle class two-parent households. However individual differences such as age of entry, and temperament were not controlled. This may have had an effect on results. Moreover this study used previously transcribed observations that researchers reanalyzed. All observational data took place during the morning. The effects from length of time in a day spent in care were not represented, leading to a lack of representative data.

Transcription of each peer interaction was completed by a trained observer. Only the behaviours relevant to the coding system was included. Coding schemes were well described and outlined in detail. Appropriate statistical tests were employed and reported. Conditions of the study, as well as descriptions of play structures to be observed were reported sufficiently. Exposure to peers at an early age and peer competence was found to influence the types of play a child is exposed to which affects the child's social development. Furthermore, types of experiences and amount of time children are exposed to peers showed an effect on children's social development. Overall findings were found to be suggestive, when considering the limitations in

generalizability of results and limited control over individual factors.

Howes et al (2016) investigated the quality of child-care centers and the effect on peer and adult relationships using a cohort study design. The sample of the current study consisted of 414 children ranging in ages from 14 to 54 months who were currently attending day care. Each child was observed in his or her classroom for at least two hours, which covered both morning and afternoon activities. Licensing standards for ratios were found to make a difference in the quality of care. There was no association found between group size and appropriate caregiving. There was no significant association between security and developmentally appropriate activities. Children's security with teachers was found to be associated with complexity and amount of peer interactions. Overall child teacher ratios, attachment profiles (securely attached, avoidant), and social orientation to adults were associated with competence with peers.

Participants were well described and inclusion criteria specified. Participants represented a full range of social classes, including children in sub-sidized housing and children from two-parent relatively wealthy homes allowing for a representative sample. Methods were described thoroughly and appropriate measures and scales were implemented that comprehensively assess the day to day quality of care provided to children. Interrater reliabilities for structural and process quality were established and deemed appropriate. Multiple measures of peer interaction were derived from appropriate scales and outlined thoroughly. Overall procedures were well described, however no placebo or blinding occurred. Results were statistically sound and compelling made evident by attachment to teachers, regulated ratios, and social orientation to adult all being predictive of peer competence.

Case Control Studies

Peterson et al (1986) observed mother-child interactions and investigated whether differences in care mediate children's experiences using a case control design. Participants were divided into three groups; 1. High quality, 2. Low quality, 3. Home care with a total of 66 participants being included in this study. Children ranged from three to five years old. The mother and child engaged in three interactional episodes; one where mother attends to child, ignores child, and child is responsible for following a task mother completes. Results found that children attending poor quality child care were less compliant

with task instructions when compared to the high quality group. Additionally, expressive output was limited to single statements in the poor-quality group. Verbal interactions in the home care group were observed to have more sustained dialogue than the poor quality group.

A possible selection bias for participants was present, due to all centers in the area may not be listed in the directory, and all the mothers included in the home care group were not randomized, but rather neighbours or friends of women whose children were in daycare. Biases towards higher educated parents of children in high quality centers was reported by researchers. Researchers attempted to control for individual family differences indicated by almost all families in the day-care groups being employed and middle class, however this affects generalizability of results due to a lack of a representative sample being included.

Children of high quality centers were randomly selected leading to higher levels of confidence in result findings. Reliability measures were reported and reasonable. Observers were blind to the group membership of the mother-child pair, which reduced biases.

Overall this paper is suggestive, in that this data may not be generalizable to peer interactions, in that children are most familiar with their primary caregivers. Overall different behaviours are observed between children attending child-care centers of different qualities, suggesting that it is a difference in quality rather than a specific difference between home-care and day-care in children's progression in their social development, lending more information on the individual factors that affects children's development.

Kowalksi et al (2005) were interested in the relationship between long-day care and the influence of context on emerging pretend play through the use of a case control study. Participants included 48 toddlers aged 17-31 months who attended long-day child -care. Children were observed during free play with same aged and mixed aged peers. A number of environmental contexts were assessed, such as quality of care, provision of materials etc. Results found that attendance of four or more days in child care was favourable in promoting prosocial behaviours. Furthermore play with older preschool aged peers influenced complexity of pretend play.

Participant eligibility criteria was specified, however sample size was limited and a larger sample size

would have been beneficial to increase generalizability. Screening measures and methods used to ensure the older children in the study had adequate language and cognitive skills to engage in age appropriate pretend play were appropriate. The study was well formulated, with a description of a plausible rationale and gold standard measures employed. Statistics were appropriate. Children were paired with an older peer who they played with regularly. It would have been interesting to see how the children interacted with older peers who they were unfamiliar with and if similar results were found. Overall the validity and clinical importance was compelling made evident by the importance of attendance and older peer exposure in promoting prosocial behaviours and social development in toddlers. This research aided in providing evidence of individual factors that promote social development.

Longitudinal studies

Howes (1990) completed a longitudinal study following individuals over three time periods (toddler, pre-school, kindergarten). Researchers looked at the influence of age of entry, quality, and family characteristics on social adjustment in children. Participants consisted of 80 children ranging in enrollment in low to high quality care and age of entry. Children were observed at multiple ages either at home, childcare center or in the laboratory during free play. Early entry into low quality child care had the most difficulty with peers, were distractible, less considerate and scored low on task orientation. Family socialization predicted outcomes when children enrolled in care after infancy compared to teacher socialization predicting outcomes of those enrolled prior to 12 months.

There were no significant demographic changes between study groups. Participants were well described, and criteria for high and low quality were set prior to observation. Each observation was performed by a research assistant blind to the group membership or family increasing confidence in findings. During the pre-school stage, each child was observed in random order, again this is a strength of the current study. Measures and procedures were well described, and observers established appropriate inter-observer reliability. One major limitation of the current study was decreased sample size reducing generalizability of findings. Overall the validity and importance is compelling in that observing children at multiple ages allowed for outcomes to be shown over a longer course of time and how the individual factors such as age of entry, family socialization, and

quality have on children's social development long term.

Broekhuizen et al (2016) explored the association between classroom quality in pre-school, kindergarten and the outcomes on social skills in grade one using a longitudinal study design. They recruited data from the Family Life Project, a large longitudinal study of ethnically diverse families living in rural areas in the United States. The sample for the current study included families and their children who participated in at least one data collection point between 36 months and first grade in addition to having basic demographics of race, gender, and state which resulted in a sample size of 1175. Previous data was collected and re-analyzed to serve the purposes of the current study. Results showed that increased emotional and organizational quality of pre-school classrooms was the strongest predictor of increased social skills and decreased behavior problems. Children who experienced two years of higher emotional and organizational classroom quality showed greater social skills and fewer behavior problems by the end of kindergarten and first grade.

A representative sample was used, and participants were well described and inclusion and exclusion criteria were well explained with a clear rationale. Methods were outlined clearly and thoroughly. A trained research assistant assessed classroom quality with implementation of appropriate methods and measures. Reliability tests were employed and documented, with both the research assistant and master coder required to score within one point for 80% for all dimensions.

A major limitation in this study, is prosocial behaviours and behavior problems were not described in detail, making it difficult to draw conclusions on current data. Appropriate questionnaires and scales were used, however limited examples of items were described in the current study. Overall the validity in results is suggestive in that individual factors such as quality and emotional support was found to have a positive impact on children's social development, however the limitations such as re-analyzation of data, and lack of detailed descriptions of variables reduce confidence in findings.

Discussion

A critical analysis of the existing literature revealed that a number of individual factors influence the

social development of children. It is not a comparison of home care and child-care, but rather delving into the individual factors in child care that promote and hinder social development. This paper reviewed seven articles which looked at a variety of factors that can affect children's social development. Longitudinal studies completed by Broekhuizen et al (2016) and Howes (1990) provided valuable information on long term outcomes of children's social development over multiple time periods showing the effect of these factors at different ages. Agreement was established between Peterson et al (1986), McCartney et al (1987), Howes (1990), and Broekhuizen et al (2016) that quality was a major factor affecting children's development of prosocial behaviours. Other factors such as regulated ratio sizes, mixed aged peer experiences, length of time in care, age of entry, attachment styles to parents and teachers, and family background were found to have an effect on children's social development by Kowalski et al (2005), Howes et al (1992), Howes (1990), and Aureli et al (1996).

Limitations of the current literature were small sample sizes as outlined by Peterson et al (1986), Aureli et al (1996), Howes (1990), and Kowalski et al (2005), which leads to decreased generalizability of findings. Furthermore Aureli et al (1996) and Broekhuizen et al (2016) re-analyzed previous data for the purposes of their current study leading to caution in interpretation of findings, with limited control over individual factors and lack of randomization. Peterson et al (1986) observed mother-child interactions, and their findings may not be comparable to peer interactions that would be present in child care settings based on the different relationship and interactions between caregivers and peers.

Clinical Implications

The current literature is important to Speech Language Pathologists (SLP's) in that colleagues will be better able to provide specific education to parents and families on the specific factors necessary to consider when looking for appropriate child-care. Speech Language Pathologists will be able to guide families on the appropriate factors to be aware of and critical questions to ask child care directors in order to lead to positive outcomes in children's development. As SLP's we are educated in the precursors for language. Before children can

communicate verbally to socialize, they use gestures, and play to interact with peers. This research is of great importance to SLP's in the role that social development has on speech and language outcomes, and in the aiding of children with speech and language difficulties that will be on our caseloads.

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