Supporting Children's Autonomy Early On: A Review of Studies Examining Parental Autonomy Support toward Infants, Toddlers, and Preschoolers

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Supporting Children's Autonomy Early On: A Review of Studies Examining Parental Autonomy Support toward Infants, Toddlers, and Preschoolers

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Abstract

There is a growing scientific interest regarding the importance of parental autonomy support (AS) in early childhood. The purpose of the present chapter is to review the prior studies on this topic, describe how parental AS toward young children (i.e., infants, toddlers, and preschoolers) has been measured, and document what child characteristics and outcomes have been associated with it. We review studies whose AS measure was consistent with SDT's conceptualization and organize them by the social context in which it was assessed: play, conversation, help provision, and socialization. After describing each study's procedure, AS operationalization, and main results, we address conceptual issues that should be considered in future studies.

Keywords: parenting, autonomy support, early childhood, systematic review, self-determination theory

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Autonomy is the most unique of SDT's posited three basic psychological needs. Since SDT also emphasizes the impact of social contexts, research has examined the extent to which individuals' autonomy is supported or thwarted within their social environments and interpersonal interactions. This research area was first mainly conducted with adults, but soon researchers showed interest in the support of adolescents' and children's need for self-determination.

Developmental science has highlighted the centrality of social environments for child development and health (Collins et al., 2003; Garner et al., 2012) and among environmental factors, the most widely accepted predictor of child mental health is parenting quality (Masten & Shaffer, 2006; Yap & Jorm, 2015). Within SDT, *autonomy support* (AS) is argued to be a central feature of optimal parenting, along with structure and involvement (Grolnick et al., 1997; Grolnick & Ryan, 1989; Ryan & Deci, 2017; Ryan et al., 2006). A meta-analysis (Vasquez et al., 2016) suggests it is also a robust predictor, showing associations with a host of positive educational and psychosocial variables (e.g., academic achievement, motivation, mental health). These child benefits have been studied at different ages, but primarily in middle childhood and adolescence. Yet, infants, toddlers, and preschoolers are especially sensitive to socialization experiences because of the remarkable plasticity in their brain organization (Shonkoff & Phillips, 2000). All environmental influences on children's developing skills, including parenting quality, are thus seen as amplified in early childhood (Britto et al., 2017; Landry et al., 2003).

Considering that (1) parenting quality is a major determinant of child development, (2) AS is a main component of parenting quality, and (3) early parental influences are of particular

significance, studying parental AS toward infants, toddlers, and preschoolers is timely and important. Indeed, it can offer vital insights about how to best satisfy young children's need for autonomy, and, ultimately, support their development and wellness. The goal of the present chapter is thus to highlight the ways in which early parental AS has been conceptualized and measured in past studies and to identify what child characteristics and outcomes have been associated with it.

Autonomy Support Definitions

AS has typically been defined within hierarchical relationships (e.g., instructor-student; Black & Deci, 2000). In an early study concerning limit setting during a painting activity with first and second graders, Koestner et al. (1984) outlined some ingredients of AS. These included (1) acknowledging the child's feelings and perspective; (2) explaining the rationale for actions; and (3) minimizing controlling language (e.g., should, must). Other experimental studies aiming to foster autonomous internalization of behaviors also included the provision of choice (Deci et al., 1994; Joussemet et al., 2004).

Within the parent-child relationship, AS definitions similarly include empathic responses and considerate behaviors based on perspective taking, the avoidance of controlling language or tactics, and the provision of choice (Black & Deci, 2000; Grolnick & Ryan, 1989; Soenens et al., 2007). SDT experts have also underlined that pertinent facts or feedback are better shared in an informational rather than a personal or evaluative way (e.g., "walls are not for painting"; Black & Deci, 2000; Koestner et al., 1984; Ryan, 1982). Moreover, promoting children's active and agentic participation (e.g., taking part in decisions and problem-solving; exploring and acting according to own interests) is posited as a key component of AS since it fosters children's sense of volition (Grolnick & Ryan, 1989; Soenens et al., 2007). Thus, when defining AS, a key issue

is that its goal is to foster children's sense of agency and volitional functioning, not their self-reliance or independence (McCurdy et al., 2020; Ryan et al., 2006; Soenens et al., 2007).

Similarly to the teacher-student relationship (Jang et al., 2010), the parent-child relationship involves the provision of structure — behaviors that organize children's environment to facilitate their sense of competence (Grolnick & Pomerantz, 2009). Structuring practices include providing clear expectations, guidelines, and feedback that help children anticipate outcomes and interact successfully with their environment (Grolnick et al., 2014). Young children need a great amount of such competence-support since they are constantly learning new skills, information, and socially encouraged values and behaviors. Given that both competence and autonomy are essential psychological needs — satisfying one need does not compensate for another unmet one (Hornstra et al., 2021) — it is not a matter of selecting between providing structure or AS, but knowing how to provide structure and AS simultaneously. Indeed, often the key is to provide structure within the context of an autonomy-supportive relationship so that the guidelines can be better accepted and internalized (Ginott, 1959, 1965). Past research supports this proposition in showing the benefits of combining structure with AS for promoting positive child outcomes (Grolnick et al., 2014; Sierens et al., 2009). Permissive, "laissez faire" parenting (i.e., to let children do as they please without parental guidance or structure) is thus *not* considered autonomy-supportive.

Parental AS Studies Conducted in Early Childhood

For this review, we searched for studies examining links between parental AS in early childhood and concurrent or prospective child concomitants. The terms employed in the PsycINFO database were: (child* or infant* or preschooler*), (parent* or parenting or discipline or child-rearing), and ("autonomy support" or autonomy support*). Our final search was

conducted on December 9, 2020. Among the 44 studies retrieved, 27 studies used an AS definition that, in our view, corresponded to SDT's conceptualization. The 17 studies we excluded pertained to distinct constructs such as independence promotion, structure, scaffolding, persuasion or negotiation, reinforcement, or they conflated AS with other constructs such as warmth or structure.

Most of the retained studies were observational and the contexts in which parental AS was assessed were play, conversation, help provision or socialization. We organized the reviewed studies based on these contexts and we present them in order of increasing levels of required parental structure. Prior to reporting obtained findings, we highlight how parental AS was assessed by reporting each measure, italicized. Operationalizations deserve attention because supporting the autonomy of younger children may require different behaviors to make parental AS developmentally appropriate. Moreover, parental AS may be manifested differently from one situation to the next.

Play

The first parental AS study was conducted with mothers playing with their 1-year-old infant (Grolnick et al., 1984). The 6-minute play session was semi-structured: three new toys were provided one at a time by the experimenter, who asked mothers to demonstrate them to their infant sitting next to them while playing with each of them. Three aspects of mothers' communications were rated from 1 (controlling) to 5 (autonomy-oriented): their vocalizations, their task-oriented behaviors, and their affect. *Autonomy-oriented communications were used to help maintain the infant's ongoing activity (e.g., verbal information or feedback, holding the toy still so the infant could manipulate it, or positive encouraging affect).* In contrast, *communications aiming to change the infants' ongoing activity (e.g., verbal prohibitions and*

directions, guiding the child's hand away from one part of a toy, or stern disapproving affect) were rated as controlling. The three AS scores were obtained by averaging across 10-second intervals and toys. Infant persistence, affect, and competence were later coded during their independent play with the same toys presented by an experimenter one at a time, asking the infant to "make it work". Results showed that greater child persistence (i.e., duration of task-related behaviors) was related to autonomy-orientation in mothers' task-directed behaviors (e.g., holding the toy still vs. guiding the child's hand), while more positive child affect was associated with autonomy-orientation in mothers' affect (e.g., positive encouraging vs. stern disapproving affect). Child competence (number of solutions or appropriate attempts) was positively but weakly correlated to a maternal AS composite, computed across the three ratings (Frodi et al., 1985). Eight months later, Frodi et al. (1985) re-observed these dyads, using the same coding schemes, but adding a child attachment measure. Maternal AS was coded in the same structured play context with their 20-month-old, but only the composite AS across task-oriented behaviors, vocalizations, and affect was used. This global AS toward 20-month-olds was positively associated with concurrent child persistence and competence during independent play, and weakly related to more positive child affect. However, none of the 12-month AS ratings was found to be related to infants' play, and child attachment was unrelated to prior or concurrent AS.

Using data from a large longitudinal study, Bindman et al. (2015) examined whether early maternal AS during play predicted school achievement by facilitating child executive functioning (EF). Play was semi-structured, as mothers were provided toys and activities but could interact as little or as much as they wanted. Play sessions of 15 minutes were coded at 6, 15, 24, and 36 months of age. Maternal intrusiveness was coded in the first three sessions while

AS was coded at 36 months only. A global "AS vs. controlling" index was computed to capture AS from infancy to toddlerhood by averaging *reversed intrusiveness (hurrying child, promoting own goal, redirecting child's play, punishment)* and *AS (flexibility, following child's pace and interests, allowing child to take the lead when appropriate).* When children were 4.5 years old, their EF was assessed with four tasks tapping inhibition, delay of gratification, and sustained attention, later combined into a single latent EF construct. Finally, their academic achievement in grade school and in high school were derived from math and reading assessments conducted in 1st, 3rd, and 5th grade and when youths were 15 years old, respectively. Structural equation modeling (SEM) showed that maternal AS was positively associated with EF, over and above mothers' cognitive stimulation and warmth, as well as a host of child and socio-demographic factors (e.g., temperament, income-to-needs ratio). Furthermore, school achievement was positively linked to AS and this AS-achievement link was partially mediated by EF.

Long-term associations between early AS during play and later academic achievement were also examined by Sorariutta et al. (2017). In a first study, mothers were observed playing with their 1-year-old for a 10-minute semi-structured play session. Toys were provided by the experimenter, who asked them to play as they would normally do. Their coding scheme rated AS and scaffolding separately. AS was assessed with three items, rated on a 5-point scale: *(1) goals are set mainly by the child, (2) allows the child's independent activities, and (3) controls and restricts the child's cognitive processes and occasionally even interrupts the child's activities to reach own goal (reversed).* Varied spatial and number concepts were assessed at 3 and 4 years old with size, shape, location, and number tasks. Moreover, at age 16, children reported their grades in math and in other subjects. Path analyses controlling for scaffolding revealed that maternal AS was unrelated to location skills, but it was positively related to size and shape skills

at 3 and 4 years of age, as well as to numerical skills at age 3. Moreover, maternal AS was positively linked to grades in math, sciences, and literacy at age 16. When studying the contribution of both parents on these children's pre-mathematical development, Sorariutta and Silvén (2018) coded both mothers' and fathers' AS during play sessions (one week apart) when children were 2 years old. SEM results suggested that paternal AS was positively related to better developed spatial and numerical skills at 4 years of age while maternal AS was associated with stronger numerical skills at age 3.

Conversation

In an early study integrating parental AS to the field of children's relational competence, Clark and Ladd (2000) coded conversations mothers had with their 5-year-old. There were five narrative episodes about good and bad past events, some shared, others not. Following Ryan and Solky (1996), their AS definition focused on the validation of children's opinions, feelings, and perspective. Maternal AS was thus coded as the extent to which mothers' responses were *(1) contingent upon their child's input, (2) closely related to it, and (3) validating it.* Maternal AS was positively correlated with child social adjustment, measured by kindergarten teachers (interactional harmony with friends) and classmates (peer acceptance). However, when regression analyses also included child gender, SES, and a dyadic measure of mother-child connectedness (positive engagement, positive affect, warmth, intimacy, and intensity [all mutual]), links with AS were no longer present. This may be due to the important overlap (r = .48) between AS and this potent relational factor.

In a first child autobiographical memory study integrating SDT, Cleveland and Reese (2005) coded mothers' style of conversing and child memory when they had a reminiscing conversation about four past events (three shared, one unshared). Child memory, operationalized

as the provision of new information, was coded during these conversations, which took place when children were 40 months old, and later at 65 months of age. The AS coding scheme was adapted from Grolnick et al.'s (1984) measure. Each maternal conversational turn was coded on a 5-point scale ranging from *controlling (negating children's provided information and promoting mother's memories and agenda)* to *autonomy-supportive (validating children's input and following their lead).* A global AS (vs. controlling) score was averaged across all mothers' conversation turns. The degree to which mothers used elaborative questions (open-ended *wh*-questions with some new information about the discussed event) was also coded, since such structure was shown to foster children's memory (Reese & Newcombe, 2007). After dichotomizing both variables and forming four groups, one-way ANCOVAs (controlling for expressive language) suggested that children receiving high levels of both AS and structure at 40 months of age showed greater memory about shared events concurrently as well as later, at 65 months of age.

Leyva et al. (2008) used Cleveland and Reese's (2005) coding scheme to assess mothers' AS when conversing with their 3- to 5-year-old about three past events (a shared event, an unshared one, and a child misbehavior). In addition to memory, children's engagement (i.e., their eagerness and spontaneity) was coded during these joint conversations, as well as during an independent, researcher-led interview. When shared and unshared events were discussed, maternal AS was related to greater child engagement with their mothers. AS during unshared event conversations was also positively related to child engagement with the interviewer. However, AS during the shared event and misbehavior conversations was (surprisingly) negatively related to children's provision of new information during the independent interview.

Similar results were obtained by Larkina and Bauer (2010) despite using a different but conceptually similar coding scheme. Indeed, the focus was on acknowledging the validity of children's perspective and individuality, from 1 *(denying the child's point of view, insisting on own agenda, showing no interest in the child's opinion, interrupting often, and negating the child's contributions)* to 6 *(giving the child opportunities to talk, following themes introduced by the child, focusing on the child's memories, and showing an interest in the child's opinion and version).* Four-year-old children whose mothers displayed greater AS when discussing shared events were more involved during these conversations. Moreover, AS was linked to greater involvement and greater memory in a separate, researcher-led interview. These links were present even when controlling for the rated quality of mothers' instructions (akin to structure).

Also interested in child memory, Kulkofsky (2011) explored how maternal AS can contribute to it. After a first reminiscing conversation about a shared, typical event, mothers had two other conversations with their 4-year-olds, each with a different goal in mind: trying to bond with their child and trying to teach them a lesson. For each maternal conversational turn, the extent to which mothers supported the child's contributions to the conversation was coded on a 3-point, AS vs. controlling scale, inspired by the Cleveland and Reese (2005) coding scheme. *"Confirming and expanding"* was considered autonomy-supportive, *"continuing but taking a specific direction"* was coded as neutral, and *"negating or changing topics"* was scored as controlling. Results showed that maternal AS was related to better child memory, but only within the bonding conversational context.

In a recent study, van der Kaap-Deeder et al. (2020) coded both mothers' and fathers' styles during reminiscing conversations, based on the Cleveland and Reese (2005) scheme and a challenging task scheme (Wuyts et al., 2017). Parents were invited to talk about two shared

memories with their 3- to 6-year-olds: a positive one and a mildly negative one. Controlling and autonomy-supportive codes were rated separately, but a single composite score was created (controlling codes reversed). AS was based on the following ratings*: (1) responding to children's input, (2) acknowledging children's feelings, and (3) attentively listening to child,* whereas controlling codes reflected the extent to which parents *(1) determined the conversations' content, (2) neglected/minimized the child's experiences, and (3) interrupted the child.* The extent to which parents used elaborations, positive feedback (affirming child content) or negative feedback (negating child content) were also coded. Since each child conversed twice with each parent, multilevel analyses were conducted. Controlling for conversations' emotional valence, elaborations, and feedback, results revealed that children were more engaged when parental AS was greater. However, AS was unrelated to child memory or their general emotional functioning.

Two experimental studies examined parental AS in the conversation domain. After a shared visit to a pretend zoo, Cleveland et al. (2007) manipulated the goal of parents' conversations (i.e., to see what the child's perspective is vs. to get the child ready for a memory test). Irrespective of the experimental condition, preschoolers whose mothers showed greater AS in the zoo conversation were found to be more engaged during an experimenter-led interview two weeks later, but there was no relation with children's memory or narrative coherence.

In their parental training study, Cleveland and Morris (2014) examined the recall, narrative coherence, and engagement of 4-year-olds whose parents received either an AS or an elaboration training. During an experimenter-led memory interview two weeks later, recall and coherence were greater among children of elaboration-trained parents whereas children of AS-trained parents showed greater engagement. Interestingly, the latter were still more engaged when interviewed at an 8-month follow-up and showed greater recall during its directed phase.

Help Provision

To measure parental AS while working on a challenging task with their child, Whipple et al. (2011) developed a coding scheme to assess mothers helping their 15-month-olds to complete two puzzles, designed to be slightly too difficult for these infants. This coding scheme was based on Grolnick et al.'s (1984) rating system, Grolnick and Ryan's (1989) study examining parents' motivating style for school-related behaviors, and Grolnick et al.'s (2002) study examining mothers' behaviors during homework-like tasks. In this helping context, four 5-point ratings (from not to extremely autonomy-supportive) assessed the extent to which a mother *(1) intervenes according to her infant's needs and adapts the task to create an optimal challenge for the child; (2) encourages her child in the pursuit of the task, gives useful hints and suggestions, and uses a tone of voice that communicates to the child that she is there to help; (3) takes her child's perspective and demonstrates flexibility in her attempts to keep the child on task; and (4) follows her child's pace, provides the child with the opportunity to make choices, and ensures that the child plays an active role in the completion of the task.* Thus, the operationalization of AS included behaviors that qualified parental support when working with young children on problem-solving tasks (e.g., informational vs. controlling feedback; useful hints and suggestions vs. intrusive help). AS was positively correlated with infants' attachment security, also measured at 15 months of age. Regression analyses also showed that AS was still predictive of attachment security even when controlling for the contribution of maternal sensitivity.

In their longitudinal study exploring whether such AS could facilitate children's executive functioning (EF), Bernier et al. (2010) followed up these dyads and tested children at 18 and 26 months of age on a variety of EF tasks. Maternal AS at 15 months of age correlated positively with location memory and categorization at 18 months. At 26 months of age, delay of

gratification was unrelated to prior AS, but conflict EF (i.e., working memory, inhibition, and set shifting; allowing an appropriate response in the face of a salient conflicting response option) was positively related to it. Regression analyses also showed that AS was uniquely predictive of some EF indicators even when other parenting variables were considered.

Similar patterns of results were replicated when Matte-Gagné and Bernier (2011) reassessed these children's EF at 3 years old: 15-month AS was correlated positively with EF (delay of gratification and conflict EF). Interestingly, children's more developed expressive vocabulary, assessed at 26 months of age, was also related to AS. Further, analyses revealed that the positive link between AS and delay of gratification was mediated by expressive vocabulary. When children were 3 years old, Matte-Gagné et al. (2015) reassessed mothers' AS when helping their child in a challenging block sorting task. Correlations showed that a global EF composite (combining delay of gratification and conflict EF) at age 3 was positively related to AS averaged across the 15-month and 3-year time points. Surprisingly, the concurrent AS-EF association was absent at 3 years of age.

Maternal AS observed at 15 months has also been related to later child mental health indicators. In 2018, Sirois and Bernier examined these children's levels of aggression and internalized symptoms (i.e., anxiety and depression), rated by their kindergarten and first grade teachers (averaged across both time points). In a regression analysis controlling for maternal sensitivity and attachment security, maternal AS was found to predict lower internalized symptoms during the early school years, but no link was found between AS and aggression.

As the quality of the parent-child relationship can affect child sleep, Bordeleau et al. (2012) followed this sample to test whether AS is associated with subsequent sleep quality. Using sleep diaries on three consecutive days at both 3 and 4 years of age, they found that

although AS was unrelated to concurrent sleep quality, prior AS at 15 months old was related to a greater proportion of nighttime to total sleep during the preschool period.

Parental AS during a challenging task for children has also been examined by other teams of researchers. Using Whipple et al. (2011) coding scheme, Distefano et al. (2018) observed 3- to 5-year-olds working on a challenging 12-piece cube puzzle with their parent (mostly mothers) and their control EF was evaluated with two tasks requiring working memory, inhibition, and cognitive flexibility. Parental AS was found to be associated with these preschoolers' control EF.

Fathers' AS was also coded in a challenging puzzle context. In their study, Meuwissen and Carlson (2015) used the Whipple et al. (2011) coding scheme to assess fathers while helping their 3-year-olds. Children's EF was assessed via four tasks and paternal AS was positively correlated with their child's global EF (composite of delay of gratification and control EF). When Meuwissen and Carlson (2018) followed these dyads two years later, paternal AS was reassessed during a 12-piece cube puzzle task, made challenging for 5-year-olds. Children's school readiness, a composite score based on EF and literacy skills, was used as a dependent variable. Whereas it was unrelated to concurrent AS, school readiness was associated with prior AS, assessed at 3 years of age, and expressive vocabulary was found to mediate this association.

Parental AS has also been coded in a word-teaching task. Parents were videotaped while teaching their 18 to 24 months old toddler a new word ("Wug") for a novel object (Wei et al., 2019). Toddlers' engagement during this task was coded and their subsequent word recognition was measured (i.e., accuracy proportion in a "Looking-While-Listening" lexical processing task). Parental cognitive support and AS were coded separately in this study. Cognitive support consisted of information provided about the Wug, labeling, or acting on it, either by the parent or the child. The AS coding included *(1) providing positive evaluation to child's contributions, (2)*

following the child's interest, attention, or pace, and (3) redirecting child's attention or interest to follow own agenda (reversed). Using cluster analyses, subgroups of parents were created: high vs. low in cognitive support, high vs. moderate in AS. Results suggest that AS predicted greater child engagement during the word-learning task, above and beyond parental cognitive support.

Socialization

Using an archival data set, Joussemet et al. (2005) rated maternal AS from interviews about child rearing, when children were 5 years old. Following Grolnick and Ryan (1989), who interviewed grade-school children's parents about the way they motivate and respond to their child, the rated material pertained to the socialization role. The archival data they used also included children's standardized math and reading scores and teacher ratings of their social and academic adjustment at age 8. The selected interview sections focused on motivating children to engage in desirable behaviors and follow house rules (e.g., table manners, interpersonal relations, household chores, general obedience). For each of these socialization issues, four behavioral components of AS were rated on a 5-point scale: the extent to which mothers *(1) provided rationales and explanations for behavioral requests, (2) recognized the feelings and perspective of the child, (3) offered choices and encouraged initiative, and (4) minimized the use of controlling techniques.* A global index of maternal AS was created by averaging the global score for each of these four AS components. Results indicated that maternal AS was unrelated to math achievement, but positively related to reading achievement as well as teacher-rated social and academic adjustment at 8 years old, while controlling for mothers' use of rewards, praise, and their investment in child's educational performance.

Originally designed for parents of adolescents, the Parent as Social Context Questionnaire (Skinner et al., 2005) measures AS, its opposite, coercion, as well as both poles of the other two

parenting quality dimensions (i.e., structure and chaos; warmth and rejection). Though not specifically designed to study the request or discipline aspect of parenting, it is relevant to the general parenting style and may influence socialization situations. Zimmer-Gembeck et al. (2015) adapted this self-report scale for parents of toddlers. Its AS subscale includes four items, rated from 1 (not true at all) to 4 (very true): *I always encourage my child to express his/her feelings, I support my child's efforts to try new things on his/her own, I support my child to be him/herself,* and *I allow my child to explore things by him/herself.* Recruited mothers, referred or interested in a parenting program due to parenting difficulties, were invited to complete this questionnaire about their 1- to 3-year-old and toddlers' attachment security was assessed. In this study, maternal AS was not associated with toddlers' attachment style.

Inspired by education studies investigating concrete behaviors that characterize an autonomy-supportive approach (Côté-Lecaldare et al., 2016; Reeve et al., 1999), Andreadakis et al. (2019) explored how parents manifest AS in a request situation. Parents of toddlers completed a classical AS questionnaire, the Parent Attitude Scale (PAS; Gurland & Grolnick, 2005), and rated the extent to which they used 26 potentially autonomy-supportive ways to ask a toddler to engage in important yet uninteresting activities (e.g., pick up toys, brush teeth). Eight practices loaded on an AS factor and related positively with the PAS: *various ways to communicate empathy, providing developmentally appropriate rationales, describing the problem in an informational way, and modeling the requested behavior.* The more parents reported using these practices, the more their toddlers were reported to display committed compliance (CC; Kochanska, 1995), an early indicator of rule internalization as it reflects toddlers endorsing parental demands and embracing tasks wholeheartedly (e.g., spontaneously picking up toys).

Autonomy-supportive and controlling practices were also coded during a request situation by Laurin and Joussemet (2017). Following each of two free-play sessions (one to two weeks apart), mothers were invited to ask their 2-year-old to clean up toys and try to make the task more the child's responsibility than theirs. Coding of the two play sessions (total of 14 minutes of clean-up in 30-second segments) was done for controlling practices (physical force, threat/punishment, criticism, bribe) and for AS. The following practices were coded to represent AS in this request context: *(1) giving meaningful reasons for cleaning up, (2) encouraging choices or taking the child's input into account regarding the way to clean up, (3) suggesting (vs. giving orders, as a form of non-controlling language), (4) describing (e.g., a perceived problem, without suggesting its solution; e.g., "oh, there are some blocks left in that corner"), and (5) singing a cleanup song.* The first three codes were based on the classical definition of AS (Grolnick & Ryan, 1989; Koestner et al., 1984) and the latter two were coded to explore the ways in which parents communicate in an informational way. Toddlers' CC was coded during this request context as well as during a prohibition context (i.e., not touching attractive toys; total of 62 minutes) at 2 years of age as well as subsequently, when they were 3.5 years old. Results revealed that maternal AS at 2 years old was associated with greater CC 1.5 years later, controlling for baseline CC and mothers' controlling practices.

Discussion

Together, these 27 studies reflect the growing scientific interest in parental AS in early childhood. Apart from two early studies conducted in the 1980s, the reviewed studies were all conducted during the last two decades, and nine of them were published during the last five years. The present review highlights the richness of this emerging literature and suggests converging evidence of positive associations with a range of infant, toddler, and preschooler

characteristics and outcomes. Indeed, young children's motivation (e.g., engagement), emotions (e.g., positive affect), social relations (e.g., attachment security), cognition (e.g., executive functioning), language (e.g., vocabulary), and academic achievement (e.g., grades) were all found to relate positively to parental AS, which was assessed mostly via observations.

Similar patterns were reported repeatedly and across different contexts. This suggests that these links are robust, but a meta-analytic strategy will be needed to quantify their size. Importantly, as most studies were correlational, child effects should not be ignored. Yet, experimental studies also suggest a positive effect of parental AS on child outcomes (e.g., Cleveland & Morris, 2014). Finally, studies including fathers are needed to investigate the unique role of paternal AS since the vast majority of studies focused exclusively on maternal AS (see Sorariutta & Silvén, 2018; van der Kaap-Deeder et al., 2020, for exceptions).

Some Conceptual Challenges

Controlling Practices

Some of the reviewed studies measured AS on a continuum from controlling to autonomy-supportive practices. Although early AS definitions did include a "lack of controlling language and tactics" component, autonomy-supportive behaviors are distinct from controlling ones (Soenens et al., 2009). We recommend examining parent AS separately from controlling parenting to rule out the possibility that findings are uniquely due to variations in the latter. Examining the benefits of AS over and above the damaging impact of controlling parenting would indeed further knowledge on their independent contribution. This would be particularly helpful for knowledge transfer, as parents could learn practices they may want to favor, in addition to knowing what practices to avoid.

Structuring Practices

A number of studies on parental AS during play and word teaching contexts coded and controlled for cognitive stimulation and still found that AS was beneficial for young children. Similarly, a few conversation studies controlled for elaborative questions, since such structure promotes reminiscing. We view this stringent approach favorably, as it promotes conceptual clarity and diminishes the possibility that the predictive significance of parental AS is solely due to such competence support.

Since competence support is at the heart of help provision, scaffolding was included in the measure of parental AS in challenging task contexts. Scaffolding is based on a "contingent shift approach" in which adults *adjust* the level of help they provide according to children's abilities (Wood et al., 1976). It promotes children's active participation, which contributes to skill development — documented mostly in cognitive and academic domains (Mermelshtine, 2017). In our view, scaffolding is autonomy-supportive when children are facing a task that is too challenging for them to be agentic by themselves. However, we posit that AS should not be equated with scaffolding nor reduced to it, as it is unfortunately suggested in some studies. Indeed, scaffolding aimed at promoting child performance (vs. agency) or manifested in a pressuring way could be experienced as controlling. We thus stress that to be considered autonomy-supportive, the goal of scaffolding or other parenting practices should not be child immediate success, but child agency.

Likewise, as many studies were conducted within contexts involving parental structure, there is some competence support inherent in some of the coded autonomy-supportive behaviors (e.g., providing solicited hints, informational positive feedback, describing problems). However, it is unfortunate that AS has been described as "facilitating child success" in some studies, as orienting AS's foci toward competence and away from volition begets conceptual confusion.

Autonomy-supportive behaviors are not enacted so that children "get it right", but rather to make sure nothing prevents them from trying and exploring (i.e., so that children can be agentic and volitional). For instance, "providing useful hints" is probably not autonomy-supportive when such help is not needed or solicited, whereas doing so when a child is stuck (Grolnick, 2003) is promotive of agency. Likewise, informational, positive feedback may be autonomy-supportive when used to *affirm* child actions, but not when used to reward children's success or compliance (Reeve & Jang, 2006).

Agency vs. Activity

There can also be some ambiguity about encouraging children's activity and engagement when providing help. We believe that the essence of initial ratings such as "maintaining *vs. changing* children's ongoing activity" (Grolnick et al., 1984) taps children's volitional functioning and agency. We highlight "vs. changing" because the goal is not to prolong their sustained attention but rather to let children choose the object of their attention. We believe that solely using the term "maintain" could be misinterpreted as aiming to keep children on task, with the possibility of doing so in a controlling way (e.g., pressuring a disinterested child to persist on a task). Avoiding "changing topic" and letting young children decide (what to look at, do, talk or think about, etc.) is a key feature of AS. It is similar to the "conceptual contingency" component of a responsive behavior (Landry et al., 2006; Tamis-LeMonda et al., 2001). In the responsiveness literature, rather than "redirecting" their babies' focus, responsive parents respond in a way that is *related* to their babies' behavior, utterance, or object of attention (e.g., affirmation, expansion, imitation). Consequently, although we agree that informational encouragements (Reeve & Jang, 2006) offered to discouraged children can help them regain their

sense of agency, we note that factors such as fatigue, attention span, and affect should also be taken into account.

In sum, to further our knowledge about parental AS and its effects, it would be valuable to avoid conflating constructs when possible (e.g., studying SA while controlling for cognitive stimulation or warmth). In addition, assessing structure and AS separately is key to ascertain their relative contribution and interaction. We suggest doing so without excluding complex behaviors that may support more than one basic psychological needs, but by studying them separately from those supporting either autonomy or competence (based on factor analyses or their correlations with psychological needs). Finally, efforts should be made to specify the features that make coded behaviors autonomy-supportive.

Common and Context-Specific AS Features

Overall, this review highlighted many common conceptual elements across measures of parental AS although they were adapted to different contexts. Young children's active and agentic participation was present in many AS measures, taking various forms (e.g., child choosing a topic, able to try a task, selecting a goal, suggesting a strategy). Considering children's internal frame of reference was also a key AS behavior. Many aspects of their experiences (e.g., ideas, emotions, memories, goals) can be recognized, validated, and taken into consideration by parents when they interact with their children, even very young ones. Children were also provided with needed information (e.g., expectations, rationales, explanations, feedback) in a considerate, non-dominating way. These common features have also been observed with other age groups and in other types of hierarchical relationships (see Mageau & Joussemet, this volume, for more on these central AS features).

Beyond coded behaviors, several parental qualities were also made salient by reviewing these studies. In line with research conducted with older children, autonomy-supportive parents are described as displaying perspective taking and seem to have a child-centered approach rather than a performance-driven one. Parental flexibility was part of many AS measures, highlighting that when parents aim to support their children's autonomy, it involves a degree of openness to follow children's ideas, capacities, and pace, and to take their emotions and preferences into account. Finally, although parents should not relinquish their authority, providing structure and AS simultaneously involves some power sharing or, at least, a less domineering attitude. For instance, modeling may convey that parents are not above the principles and rules they wish to teach (e.g., I, too, am wearing a bike helmet) and sharing good reasons for following them is opposite to enforcing blind obedience.

Regarding what is unique to the manifestation of early parental AS in each context, following young children's lead seems central for play interactions while providing validating and related responses was underscored for conversations. When children engage in a challenging activity, tailoring parental help to promote child agency seems key, whereas providing rationales and empathy is particularly important to be autonomy-supportive when making requests (see Mageau & Joussemet, this volume, for further discussion on context-specificity).

Knowledge Transfer

There are now many interventions designed to foster AS within different hierarchical relationships, mostly teacher-student ones (see Su & Reeve, 2011, for a meta-analysis). With regards to parenting, AS is central in some recently evaluated interventions, such as the Parent Check-In, a 2-session individualized intervention (Allen et al., 2019), and How to talk so kids will listen & Listen so kids will talk (Faber & Mazlish, 1980, 2010), a 7-session parenting group.

Compared to waitlist controls, parents of grade school children assigned to these interventions increased in AS (Grolnick et al., 2021; Mageau et al., submitted). Other promising AS interventions focus on specific goals such as homework (Froiland, 2011) and oral health (Weber-Gasparoni et al., 2013), the latter targeting parents of 1- to 4-year-olds. Although research assessing AS programs for parents is still embryonic, especially for families with young children, empirical evidence shows that parents can learn how to be autonomy-supportive.

Conclusion

In conclusion, research conducted in early childhood supports SDT's proposition that all human beings should benefit from having their autonomy supported, even very young ones. Although babies and preschoolers' language, cognitive, and socio-emotional skills are not fully developed, their motivation, progress, and well-being can be fostered when their parents support their autonomy. Children's young age (and its associated characteristics, such as limited verbal communication and limited emotional self-regulation) is no excuse for depriving them from AS. At the same time, this life period can make it challenging for parents to exercise AS, as it requires extra perspective taking, and perhaps extra patience. Supportive environments and relationships for parents can certainly help them satisfy their children's needs, especially during this sensitive developmental period. Pursuing research on parental AS early in children's lives is a valuable endeavor, as it will advance knowledge about how to satisfy young children's need for autonomy in various contexts, paving the way for their healthy and flourishing life trajectories.

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