Clinical Focus

# Psychosocial Adversity in Early Childhood and Language and Literacy Skills in Adolescence: The Role of Speech-Language Pathology in Prevention, Policy, and Practice

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**Purpose:** This clinical focus article outlines key forms of childhood maltreatment (various types of abuse and neglect) and their co-occurrence with other developmental risk factors, such as parental poverty, living in crime-prone communities, and disrupted educational experiences, to focus on their implications for language and literacy skills in adolescence. Children exposed to psychosocial adversity early in life experience a range of poor outcomes in adolescence, relative to their typically developing peers, and language and literacy skills are particularly vulnerable skill sets in the face of this adversity.

**Conclusions:** The continuum from disrupted schooling to child protection and youth justice involvement is emphasized, and the expanding scope of practice for speech-language pathology at all stages of prevention, assessment, and intervention is outlined. Greater advocacy by speech-language pathologists is needed so that policy makers and practitioners in other service sectors have a better appreciation of the importance of language and literacy skills in early life.

One of the most solid certainties in contemporary developmental psychology is the importance of a healthy start to life with respect to the quality of the interpersonal space in which infants and young children are reared. Early nutritional status and environmental health have long been understood to play key roles in setting infants and children up for good physical well-being across the life span (Heindel & Vandenberg, 2015). Research since the mid-20th century has also confirmed the importance for psychological health across the life span of strong, secure attachments to primary caregivers in infancy and early life (Ainsworth, 1978; Perry, 2009). Human infants are among the most dependent on adult caregivers of all species on the planet and remain so for far longer than any of their primate relatives (Falk, 2009). This lengthy period in the dyadic interpersonal space provides rich opportunities for optimal social–emotional learning, language acquisition, and cognitive development. When infants are cared for by adults who are warm and responsive, they learn to respond to and initiate multiple "serve and return" interactions across the day that are co-constructed and mutually rewarding (Newman et al., 2015). Infants are not passive partners in this early conversational space; they thrive on engagement with adults and display immediate displeasure and distress if adult attention is not readily available, as evidenced by the famous "Still Face Experiment" (Tronick et al., 1982).

Infants who experience warm, responsive parenting in the first 2 years of life are likely to display what Ainsworth (1978) described as a *secure attachment style*. This means that they have an internal working model of the world that tells them that adults are generally reliable sources of comfort and can be trusted to return after periods of absence (notwithstanding the fact that the absence itself may be initially distressing). Securely attached infants are open and responsive to soothing advances from their caregiver and go on to develop a generally strong sense of self

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in the intra- and interpersonal space. Ainsworth also described a range of dysfunctional attachment styles, including *anxious-ambivalent* and *anxious-avoidant,* and later, an additional category—*disorganized*—was added by Main and Solomon (1986). Children with an anxious-ambivalent attachment style experience high levels of distress on separation, followed by difficulty being calmed on reunion with the attachment figure. Anxious-avoidant attachment styles are characterized by distress on separation but an inhibited, guarded response to the caregiver's return. In many cases, echoes of these attachment styles are clearly discernible in adult mental health problems such as anxiety, depression, and personality disorders, all of which entail difficulties succeeding in interpersonal relationships and intrapersonal regulation (Goodwin, 2003).

In terms of brain development, the early years see rapid synaptogenesis, increased dendritic arborization, and myelination to support the establishment of new neural pathways, in an experience-dependent fashion across developmentally sensitive periods (Taliaz, 2013). For this reason, high-quality early learning environments and preschool experiences are recommended for all children, to ensure adequate opportunities for sensorimotor exploration, social interactions and cooperation with peers, language and cognitive development, and the transition to literacy (Mustard, 2007). While such early experiences are not a guarantee against later adversity, they set children up for success at subsequent developmental stages. Unfortunately, a significant proportion of children do not experience these warm, stimulating, and trusting relationships with adult caregivers and, instead, are exposed to early environments that are so adverse that they have neuropsychological profiles characterized by memory and learning difficulties and global cognitive delays, which contribute to disproportionately high rates of academic struggle and school adjustment issues in this population (Bick & Nelson, 2016). As discussed further below, early maltreatment in developmentally sensitive periods also has significant negative implications for language and literacy development, so it is important to review the conditions that support and promote these early developmental processes.

## The Home Literacy Environment: Where Early Oral Language Development, Family Functioning, and Preliteracy Experiences Connect

The preschool years are characterized by major developments in language comprehension (marked initially by turning to own name, responding correctly via eye gaze, or pointing in response to questions such as "Where's the teddy?"); expressive vocabulary acquisition; early emergence of word combinations; and mastery of pragmatic functions of language, such as making and responding to requests, comments, commands, and protests (Owens, 2016). All of these developments reflect what Geary (2008) referred to as the biologically *primary* nature of oral language, meaning that humans have evolved for language acquisition in the same way that they have evolved for walking. Barring the presence of disabilities, these biologically innate skills will emerge within certain typical periods during early life. According to Geary, skills such as reading, writing, and spelling, though *based* in oral language, are biologically *secondary* and require direct and formal teaching. The picture for early language development is not, however, a simple case of "set and forget." While humans do have an evolutionary predilection to learn to comprehend and use language, the extent to which children's home environments provide linguistically rich learning contexts for language has long been known to be variable (both quantitatively and qualitatively) and to sit on a socioeconomic gradient (see Snow, 2019, for a review). This socioeconomic gradient represents the fact that parental education level and occupational status are proxy markers for the amount as well as richness and complexity of adult language to which children are exposed, as demonstrated in landmark studies such as those carried out by B. Hart and Risley (1995). It is important to note that this gradient has both environmental and genetic inputs, as genetic factors such as the heritability of language disorder (Newbury et al., 2005) influence the kinds of environments that parents are able to provide for their children by virtue of their own language skills, noting that gene expression is a function of both biological factors and the social environment (McMurray, 2016). This important and complex interaction has been studied with respect to the home literacy environment (HLE), which was defined by S. A. Hart et al. (2009, p. 911) as "…participation in literacy activities in the home, and includes both exposure to and frequency of parental activities such as joint book reading, modeling of independent reading and support of literacy-related activities, providing books, and going to the library."

The HLE also extends to literacy resources in the home and parental attitudes toward literacy (Puglisi et al., 2017). As such, it is important to consider both *formal* and *informal* literacy interactions in the HLE. Formal literacy interactions encompass activities in which adults directly teach reading or print-related skills at home (e.g., writing the child's name, teaching letter names and sounds) and are considered to promote code-based skills. Informal literacy interactions include parents reading to their child as well as directing their attention to environmental print and are thought to promote oral language skills and comprehension (Puglisi et al., 2017).

Consideration of the quality of the HLE experienced by vulnerable children is important because of known (but complex) patterns of covariation between early risk factors, such as low socioeconomic status; living in a disadvantaged, possibly crime-prone community; child maltreatment; and household chaos on the one hand and poor adolescent outcomes with respect to language, literacy, academic achievement, and mental health on the other (Snow et al., 2020). The developmental benefits for children of being reared in calm, orderly home environments are well established (Hart et al., 2007), and specific benefits of this with respect to vocabulary and phonological awareness skills have also

been reported (Johnson et al., 2008). Garrett-Peters et al. (2016) reported that household disorganization explained a significant proportion of variance in children's academic achievement, and Weatherburn (2001) summarized features of parenting, such as low attachment; harsh, erratic discipline; and high levels of conflict in the home, that contribute to children's trajectories toward antisocial behavior in adolescence. Clearly, the aggregation of genetic and environmental risk factors in some children's lives is such that the development of language and literacy skills is threatened, and their opportunities to achieve their potential are curtailed from an early age. This is particularly so for children who come to the attention of statutory services because of their experience of alleged or substantiated maltreatment.

## Childhood Maltreatment

The World Health Organization (2016) defines child maltreatment as

> …the abuse and neglect that occurs to children under 18 years of age. It includes all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power. Exposure to intimate partner violence is also sometimes included as a form of child maltreatment.

As noted above, the term *child maltreatment* encompasses both abuse and neglect, and these can be further analyzed to take in a range of specific developmental domains. One of the most extreme and catastrophic forms of early abuse is *shaken baby syndrome,* whereby a crying infant is vigorously shaken by an adult (not uncommonly a nonbiological male parent figure), causing diffuse axonal shearing and hemorrhaging in the brain. Shaken baby syndrome is fatal in approximately one third of cases and typically results in long-term neurological (e.g., blindness) and neuropsychological (e.g., learning difficulties) sequelae in survivors (Krug et al., 2002). Tragically, the number and range of ways in which children can be abused and neglected in infancy and childhood is almost limitless. Common forms of abuse include verbal abuse (shouting and swearing at or in close proximity to children), physical abuse (ranging from excessive use of legally sanctioned discipline such as smacking to the deliberately cruel infliction of pain and harm through beatings and use of restraint), emotional abuse (scorn, belittling; withholding of positive experiences), observing domestic violence, and sexual abuse (Higgins, 2004).

Neglect is the most commonly occurring form of maltreatment but has ironically been neglected as a topic of research, relative to abuse (Stoltenborgh et al., 2013). This is significant because it has pervasive long-term consequences in its own right, including dysfunctional attachment styles, substance abuse, engagement in violence, and reliance on social and health services across the life span (Stoltenborgh et al., 2013; Teicher & Samson, 2016). Importantly, neglect is not necessarily tied to poverty, as many forms of neglect occur in the context of adequate resources (Krug et al., 2002). Neglect is also multidimensional, taking in a dereliction of the child's everyday physical and nutritional needs, failure to provide an adequately stimulating age-appropriate environment, lack of supervision, and a failure to ensure that the child engages fully with their educational opportunities, sometimes even at the basic level of consistently attending school (Debowska et al., 2017; Krug et al., 2002). The cooccurrence of different forms of abuse and neglect is common, but they are difficult to disentangle from each other (Debowska et al., 2017). Some researchers have argued, therefore, that it is not possible to reliably determine the relative presence and influence of different forms of maltreatment in a given child's life at any point in time (Bromfield & Higgins, 2004). The term *multi-type maltreatment* has been proposed to describe the experience of children who have been subjected to maltreatment across more than one of the categories mentioned above (Higgins, 2004).

### *Maltreatment Prevalence*

It is difficult to accurately ascertain community levels of maltreatment because of the need for this to come to the attention of authorities via third parties such as health professionals and teachers. Other challenges in achieving reliable estimates include differences in surveillance and reporting systems within and between nations, as well as cultural variations as to where "reasonable parental discipline" ends and child maltreatment begins. It is estimated, however, that, globally, 1% of children experience maltreatment of some form (Debowska et al., 2017). In the United States in 2017, nine per 1,000 children were victims of substantiated child maltreatment, with 3 times as many young children (from birth to 3 years of age) affected than children aged 16–17 years (Child Trends, 2019). Children from non-Hispanic Black, American Indian or Alaska Native, and multiple-race backgrounds are significantly overrepresented in these statistics. Indigenous peoples and ethnic minority groups are overrepresented in other English-speaking industrialized nations as well, such as Australia (Australian Institute of Health and Welfare, 2019), Canada (Ma et al., 2019), and New Zealand (Marie et al., 2009). In most jurisdictions, the threshold for removing children from their biological parents is quite high, and systems also struggle to provide high-quality alternative care, whether residential, kinship, or foster care. Unfortunately, a small percentage of children experience further maltreatment while in the care of the state, although this can be difficult to substantiate (Biehal, 2014). Multiple changes of school are common for children in care, meaning that no one has carriage of their developmental, health, and educational histories (Wilson & Golding, 2016). Many jurisdictions end their state responsibility for young people in care when they turn 18 years old, in spite of the fact that the wider societal norm in most industrialized nations is for young people to remain in the family home well into their 20s (Beauchamp, 2016). Apart from showing an extraordinary lack of regard for the trauma, chaos, and

disruptions (and corresponding gaps in life skill development) that are typical in the lives of young people in care, this flies in the face of the established evidence that the prefrontal regions of the cerebral cortex have not yet undergone their final myelination to support the kinds of higher order executive skills, such as attention, planning, self-regulation, perspective-taking, and consequential thinking (Blakemore & Choudhury, 2006), required for any young person who is venturing into even semi-independent living, such as shared rental accommodation with peers.

### *Child Maltreatment and Language Skills*

Child maltreatment needs to be central to speech-language pathology scope of practice and advocacy because of the documented independent impact it has on children's language (and, by extension, literacy) development and social skills (Lum et al., 2018; Snow, 2009). Lum et al. (2018) also reported a significant association between the education level of caregivers and maltreated children's language scores, with higher language scores reported for those children in the care of adults with higher education levels. If borne out by future research, this could have important implications for the role of speech-language pathologists (SLPs) in influencing case management decisions regarding the placement of children and in advocating for engagement in child protection by families who can offer social and human capital (Willingham, 2012) to maltreated children in the form of stimulating home language and literacy environments and not merely care and protection in a physical sense.

It is also important to note that, in cases where children's evidence is required in a court of law (e.g., in relation to alleged maltreatment), it is their oral language skills, most notably in the form of narrative discourse, that they must draw on in order to participate in the legal process without undue disadvantage (Snow et al., 2012, 2020). Narrative discourse is the means by which children *tell their story,* so the evidence of impaired narrative skills both in elementary-age children in the children protection system (Snow, Timms, et al., 2020) and in youth offenders (Snow & Powell, 2005) is significant for speech-language pathology scope of practice. SLPs have an important role to play in supporting human services personnel and judicial officers so that oral language competence is properly accommodated in statutory and court processes at all developmental stages.

## "Crossover Kids" and the School-to-Prison Pipeline

Unfortunately, a significant proportion of children transition from engagement with child protection services to youth offending (Mendes et al., 2016; Sentencing Advisory Council, 2019; Stewart et al., 2008), reflecting a wide range of factors relating to the child and their family and community as well as the limited capacity of statutory systems to effect meaningful change in vulnerable children's developmental trajectories. Such children have recently been described as "crossover kids" (Sentencing Advisory Council, 2019). In most cases, this means that the effects of early adversity compound and develop into broader psychosocial and academic challenges in adolescence and early adulthood. This then results in a premature separation from school, in the context of low academic attainment and a history of school exclusion (suspensions and expulsions). This phenomenon has been described as the *school-to-prison pipeline* (Christle et al., 2005) and is characterized by early fracture lines in academic success and behavioral self-regulation in the elementary school years, which open into gaping cracks by secondary school.

The school-to-prison pipeline is an important construct for the speech-language pathology profession because there is a robust body of evidence indicating high levels of undiagnosed language impairment in children identified on the basis of emotional and behavioral disorders (EBD), to the extent that such children are diverted to behavioral services (where these exist) and that opportunities for speech-language pathology assessments are overlooked (e.g., Cohen et al., 1993). In fact, in their 2014 meta-analysis, Hollo et al. (2014) reported that "…it is likely that four out of five children with EBD had at least mild (language impairment) that escaped the attention of relevant adults" (pp. 181–182). This was also borne out by Chow and Hollo's (2018) finding that teachers are more likely to underestimate than overestimate risk for language disorder in children with EBD. This is significant when we consider that, in their 2018 report on a sample aggregating data on 31,647 children, Chow et al. (2018) found adolescent externalizing behavior problems were significantly predicted by early language skills, most notably receptive language abilities. Externalizing behavior problems in children and adolescents occur in the interpersonal space, for example, as misinterpretation of verbal or nonverbal cues, an assumption of hostility in the context of ambiguous social cues, and/or poor emotional self-regulation, manifesting as behavioral outbursts. Behavior disturbance may also be a manifestation of undiagnosed neurodisability (Snow, 2016), including the often overlooked, but frequently profoundly disabling, fetal alcohol spectrum disorder (Snow, 2019). Compromised language skills, it would seem, hide in plain sight when parents and, perhaps more notably, teachers are not equipped to identify children on the basis of this fundamentally important skill set. The tendency for language disorders to "masquerade" as behavior problems and/or low motivation has been long recognized in the literature (Snow, 2016) but does not appear to have translated into knowledge that is applied in everyday classroom practice.

## Adolescence and Risk Through a Language and Literacy Lens

Adolescence is the developmental transition that occurs between childhood and adulthood and is widely held, on neurocognitive terms, to extend into the early to mid-20s (Snow, 2019). Important developments occur in the

adolescent brain, including myelination of the prefrontal regions that support higher order executive functions, as noted earlier in this clinical focus article. Adolescence is also a dynamic period with respect to ongoing receptive and expressive language skills, in both the spoken and written domains. Key developments occur in the acquisition of higher order vocabulary, understanding and use of idiomatic language, refinement of pragmatic and discourse skills, and the capacity to engage with the linguistic demands of an increasingly complex academic curriculum, as well as navigating peer dynamics and changing relationships with key adults (Nippold, 2007).

Most adolescents emerge into young adulthood in a position to assume responsibility (albeit still with some adult scaffolding) for their ongoing learning and vocational directions (McNeely & Blanchard, 2010). However, those whose early years have been marred by a conflation of risks at the level of community, school, and/or family (sometimes in addition to individual-level risks as neurobiological disorders) face significant psychosocial challenges, particularly if their journey to adulthood entails formal contact with the child protection and/or youth justice systems. There is a growing body of international research indicating that such young people display a greatly elevated risk for language disorder, which, in the overwhelming majority of cases, has not been diagnosed prior to their contact with the law. As summarized by Snow (2019), research on youth offenders shows significant levels of difficulty in receptive and expressive so-called "structural language" domains (vocabulary and grammar), as well as difficulties at the discourse and pragmatic levels of everyday language use. Notably, higher rates of language disorder have been identified in youth offenders who entered the justice system with a background of child protection orders, indicating that the trajectories of these children are determined (and need to be disrupted) early (Snow & Powell, 2011).

Overwhelmingly, youth offenders have exited school prematurely (typically at or before the eighth grade), following years of academic underperformance and behavioral adjustment difficulties, such that only 15% of young people who have experienced incarceration manage to graduate from high school (Christle & Yell, 2008). The links between reading difficulties and behavior problems are long established (see Snow, 2016, for a review), yet there has been less emphasis on the mediating role of language skills in this nexus. While it is widely recognized and understood that early oral language skills promote success in the transition to literacy in the early years of school (Snow, 2016), there has been less emphasis on the role played by reading in promoting ongoing language development. This is important, however, as children's vocabulary development (especially at Tiers 2 and 3[1]) requires text exposure via their own reading (Nippold, 2007). In addition to higher order and academic vocabulary, children's own reading also promotes exposure to more complex grammatical forms, idiomatic language, and inferencing, all of which contribute to what has been termed a *lexical bar* between spoken and written language that needs to be cleared in order for students to achieve academically (Corson, 1987). When children do not successfully make the transition to literacy in the first 3 years of school, this creates a Matthew effect, whereby students who may start only narrowly behind fall disproportionately further behind their more able age-matched peers over time (Stanovich, 2009), and this has also been described in relation to reading ability in the mid-elementary years and vocabulary development (Duff et al., 2015). This is a compounding risk that needs to be considered alongside the so-called "fourth-grade slump" that is overrepresented in the reading trajectories of children from low socioeconomic status backgrounds (Chall et al., 1990).

It is important to keep close sight of students whose life circumstances, for a range of psychosocial reasons, draw them away from mainstream schools and in the direction of the school-to-prison pipeline (bearing in mind that prison need not be a literal physical space; it can also be a metaphor for being "locked out" of the social and economic mainstream). Recent evidence indicates, for example, that 72% of a sample of students ($M_{age}$ = 16 years) enrolled in a flexible education setting in Australia had impaired oral language skills and that nearly half had reading comprehension age-equivalent scores of less than 12 years (Snow et al., 2019). Just 50% of this sample reported mental health or behavioral issues as the primary reason for their referral to a flexible learning setting, yet, consistent with the findings reported earlier, none had been referred for a speech-language pathology assessment. Even more disturbing findings have recently been reported on the language and literacy skills of a sample of adolescents in state care (Snow et al., 2020), with 92% of the sample having language skills below the average range on standardized measures and the same percentage scoring in the very low range on a reading comprehension task (and 65% below average on a single-word reading measure).

Adolescence is the peak time for initial presentation of a range of mental health problems, both high-prevalence (e.g., depression and anxiety) and low-prevalence (e.g., psychosis) disorders, and is also a time of experimentation with licit and illicit substances (Patton et al., 2016). These presentations may cloud mental health clinicians' judgment with respect to the young person's language skills, such that minimal or poorly elaborated responses may be viewed as consistent with an impaired mental state, rather than raising questions about a lifelong undiagnosed language disorder. Furthermore, it must be remembered that behavior problems are a form of externalizing mental health disorder and need to be assessed and managed with equal gravity and importance as internalizing disorders such as depression and anxiety (with which they may be comorbid). Given that the mental health interventions provided for young people are almost always verbally mediated (e.g., cognitive behavior therapy), there is a need for speech-language pathology expertise at all stages of the triage and management of the

[1]The notion of vocabulary tiers is described in detail by Beck et al. (2013).

highly vulnerable young people who come into contact with child protection and youth justice services. Young people should not have to wait, however, until they are wards of the state or detainees in detention facilities, before their language disorder is identified. While there is some pleasing early evidence that speech-language pathology interventions can be effective at this "downstream" stage (Snow, 2019), waiting for a young person to be in youth detention before providing a service that supports everyday language and literacy skills flies in the face of developmental principles and intervention science.

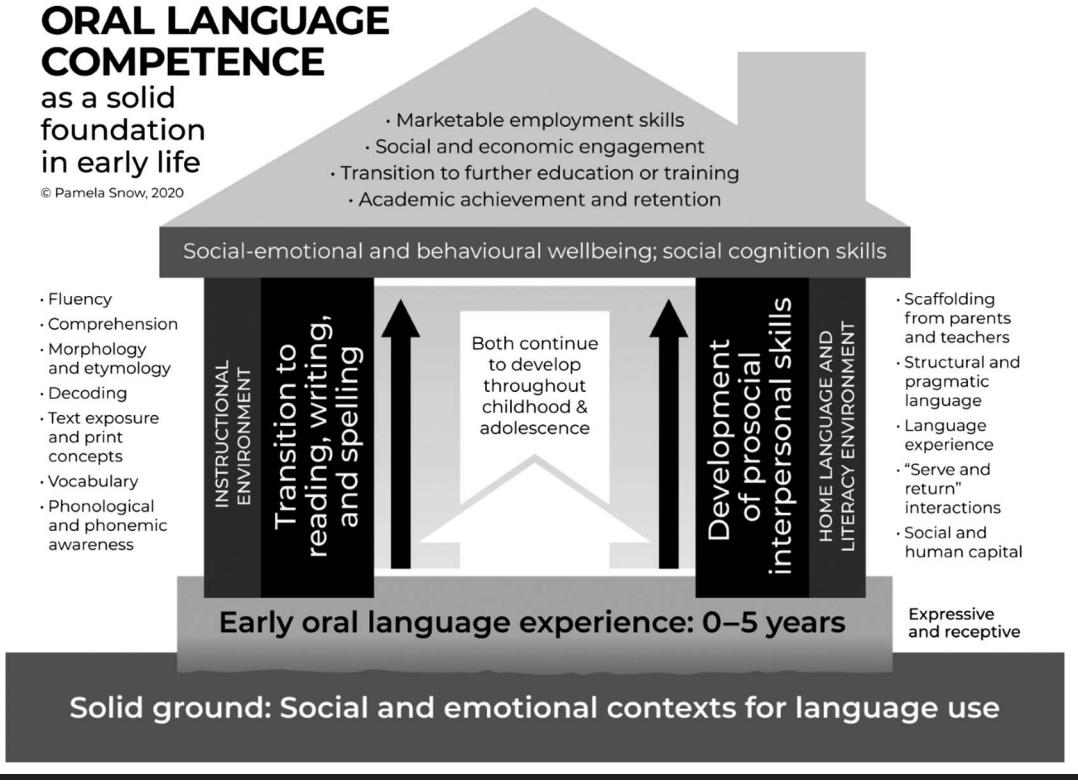
## Speech-Language Pathology Advocacy for Vulnerable Children and Adolescents

Figure 1 displays a metaphorical "Language House" (Snow, 2020) that depicts the developmental links between social–emotional well-being, language and literacy development, and academic achievement, culminating in opportunities to participate in the social and economic mainstream. This schema provides a framework for SLPs to use in raising the profile of language and literacy difficulties faced by vulnerable children and adolescents, for example, when advocating to policy makers for speech-language pathology services for populations that are currently underserved. It is also a framework that can be used to raise the awareness of SLPs working in clinical contexts where maltreatment histories may be undocumented, yet adversely impacting treatment engagement and progress. Finally, this framework could prove useful in the preservice education of speech-language pathology students, to reinforce the developmental interplay that exists between social–emotional well-being, language and literacy development, and academic achievement, as well as the fact that children's clinical presentations do not mirror the service delivery "silos" that sometimes exist.

## Conclusions

The evidence linking language disorders and emotional–behavioral difficulties in early childhood and adolescence is well established but, for the most part, has not translated effectively into protocols that support early identification and provision of interventions for elementary students with impaired language skills. Instead, the typical pattern is a compounding one of emotional and behavioral dysregulation and deterioration, academic underachievement, and exclusion from school (and, by extension, the social and economic mainstream) on behavioral grounds (Snow, 2019). Speech-language pathology services need to be available at each of these points of developmental strain, even more so when contact with child protection services has occurred or is a possibility. The school-to-prison pipeline means steady

**Figure 1.** A metaphorical "Language House" (Snow, 2020) that depicts the developmental links between social–emotional well-being, language and literacy development, and academic achievement, culminating in opportunities to participate in the social and economic mainstream.



diversion away from prosocial interpersonal role models and reduced opportunities to engage academically. Both of these vitally important developmental domains rely heavily on spoken and written language skills, and for this reason, SLPs need to be providing assessment, intervention, and secondary consultation services to at-risk children at the earliest opportunity, for example, through home visiting services to promote children's language development, the impact of which requires careful ongoing analysis (Peacock et al., 2013). SLPs need to assert their presence in interdisciplinary contexts at prevention, policy, and practice levels so that speech-language pathology scope of practice is widened to take in the needs of these particularly vulnerable children and adolescents.

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