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Foreword | *Youth offenders can be complex and challenging for policymakers and practitioners alike and face higher risk of long-term disadvantage and social marginalisation. In many cases, this marginalisation from the mainstream begins in early life, particularly in the classroom, where they have difficulty both with language/literacy tasks and with the interpersonal demands of the classroom. Underlying both sets of skills is oral language competence—the ability to use and understand spoken language in a range of situations and social exchanges, in order to successfully negotiate the business of everyday life. This paper highlights an emerging field of research that focuses specifically on the oral language skills of high-risk young people. It presents evidence from Australia and overseas that demonstrates that high proportions (some 50% in Australian studies) of young offenders have a clinically significant, but previously undetected, oral language disorder. This raises important questions about how young offenders are engaged in forensic interviews, whether as suspects, victims or witnesses. The delivery of highly, verbally-mediated interventions such as counselling and restorative justice conferencing is also considered in the light of emerging international evidence on this topic.*

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Youth (in)justice: Oral language competence in early life and risk for engagement in antisocial behaviour in adolescence

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If one was to gather a group of forensic mental health experts in a room and ask them to discuss risk predictors for offending behaviour in adolescence, it is likely that factors such as male gender, low socioeconomic status, low academic/vocational achievement, association with antisocial peers, chaotic parenting and parental mental health problems and/or lack of parental educational attainment would be canvassed as key contributory variables. While the discussion might touch on the issue of impoverished social skills, it is less likely that specific reference would be made to oral language competence in early life and its role as a risk/protective factor in the developmental years. This paper is concerned with the growing body of evidence, both in Australia (CRC funded) and overseas that identifies oral language competence as a key competency that needs to be acquired early in life, so that important interpersonal, academic and vocational goals can be achieved in pro-social ways and the risk of offending behaviour can be reduced.

What is oral language competence and why does it matter?

Oral language competence refers to a set of auditory-verbal (listening and talking) skills that are usually acquired in a steady developmental trajectory from birth onwards. It is usual to differentiate receptive (comprehension) skills from expressive (speaking) skills, as the former usually develop ahead of the latter, whether for first language learners or for the student of a second language (Paul 1995). Core component skills include vocabulary size and complexity; for example, being able to use words whose meanings differ in subtle but important ways to convey shades of meaning that are contextually important.

The most rapid and dramatic language acquisition typically occurs during the first five years of life (Owens 1996). This means that on school entry, it is usual for children to have an



extensive receptive and expressive vocabulary and to be able to share their experiences with others through the medium of the narrative. Narratives are stories that adhere to a broad temporal template so that an account can be provided that follows a logical, coherent order, taking into consideration the listener's presumed prior knowledge (Hedberg & Stoel-Gammon 1986). As will be noted below, this is a skill that has particular significance in forensic settings, where the speaker is required to 'tell their story', for police, for legal counsel and/or for the court.

Under optimal circumstances, language development occurs in the context of early attachment experiences and is paralleled by emotional attunement, and the development of empathy (Cohen 2001). These synchronies underpin the role that communicative competence plays in social cognition and social inferencing, and underline the overlap between childhood maltreatment (abuse and/or neglect) and impoverished language development (see Snow 2009).

Social cognition refers to the knowledge, processing and application of culturally relevant (and often quite subtle) behaviour that assists in establishing and maintaining interpersonal relationships of varying degrees of intimacy and complexity (Hardin & Conley 2001). In everyday life, such social challenges range from superficial 'one-off' service encounters, through to grappling with another person's reactions during an emotionally charged argument. Social cognition impacts on communication ease and success in many ways in everyday life, encompassing the ability to accurately process a face-to-face interpersonal situation by considering the verbal content, the speaker's tone of voice and facial expression, and social constraints of the context. Social cognition also takes in social inferencing—the ability to derive intended meaning from incomplete or contradictory verbal/non-verbal information that is shared in a particular social context. There are many everyday situations in which the learned understanding of politeness conventions is employed to consider unstated elements of the situation; these

then need to be weighed up alongside information that is explicitly stated, in order to accurately infer the speaker's intended, versus his/her stated, meaning. Failure to integrate the contextual, verbal and non-verbal (facial expression and tone of voice) cues in the milliseconds available and arrive at the 'right' inference will not only damage the relationship, but can result in responses that are impulsive and ill-considered.

Another key reason for concern about oral language skills in young children is their relevance for the transition to literacy in the early school years. Learning how to read is fundamentally a linguistic task (Catts & Hogan 2003), so the children who master this important transition with ease are usually ones who enter school with well-developed talking and listening skills, particularly with respect to narrative skills, phonemic awareness (knowledge of sound–letter links) and the ability segment words into natural units (Paul 1995). Some literacy researchers have invoked the so-called 'Matthew Principle' to account for this phenomenon—a biblical reference to the idea that 'the rich get richer and the poor get poorer' (Stanovich 1986). Well-developed literacy skills are inescapably important for academic success, across the entire school curriculum (Dockrell, Lindsay & Palikara 2011). Academic success in turn promotes the likelihood that the young person will progress to further education and/or training post-school, and will emerge from this with marketable employment skills. In most Australian jurisdictions, however, formal literacy instruction does not extend beyond the first three years of school (Centa 2005). At this time, a subtle shift occurs, from 'learning to read', to 'reading to learn' (Hines, Wible & McCartney 2010). Children who have not adequately managed the first, typically struggle enormously with the second (Hay & Fielding-Barnsley 2009). For boys in particular, this is often a time (around 8 years of age) when externalising behaviour difficulties becomes apparent in the classroom. Cohen et al. (1998) observed that children are typically referred to clinical services with a label derived from key adults' perceptions of their primary handicapping

condition. Boys with unidentified language difficulties who display disruptive and uncooperative tendencies in the classroom will, of course, be identified as 'behaviour problems' rather than as at-risk for unidentified language impairment and their management thereafter typically reflects this characterisation.

What does the literature tell us about early psycho-social risk and language development?

Some of the most influential research on the links between socioeconomic status and oral language competence in the early years was carried out by Hart and Risley in the 1990s (Hart & Risley 1995). By studying children being reared in three different social strata according to parents' education/employment levels, these workers showed that by age three, children of professional parents were hearing on average 2,153 words per hour, compared with the 616 words per hour being heard by children of parents on welfare benefits (with the children of working-class parents sitting in between these two extremes and hearing an average of 1,251 words per hour). More recently, Locke, Ginsborg and Peters (2002) showed that pre-school children reared in poverty performed well below expected levels on a range of measures of oral language, in spite of comparable overall cognitive skills. Locke, Ginsborg and Peters (2002) also found that socioeconomic differences were particularly marked for boys, further emphasising the cumulative risks associated with gender and social disadvantage. In assessing the importance of SES-based differences in children's exposure to language, Hart and Risley (1995: 192–193) observed that although other aspects of parenting are also important, the amount of talking that goes on between child and parent

...may be most important for the language-based analytic and symbolic competencies upon which advanced education and a global economy depend. These competencies may become increasingly important as society separates into technological and service sectors.

For boys, the combined effects of poor academic achievement, family dysfunction and low socioeconomic status are significant predictors of deviant peer affiliation and engagement with youth justice authorities (Fergusson 1998; Stephenson 2007). While cause–effect relationships between complex variables such as family circumstances, academic failure, deviant peer affiliation and offending are difficult to untangle, there is clear evidence that the aggregation of such risks is enormously costly to society. Scott et al. (2001) have noted that antisocial behaviour in childhood incurs huge financial costs via usage of welfare, criminal justice and mental health services, beginning in childhood and adolescence, and continuing into adulthood. Antisocial behaviour invariably has its onset during the primary school years and is typically associated with exclusion, either in or out of school (Stephenson 2007). Exclusion in turn produces alienation from pro-social values and role models, and reduces a young person's opportunities to succeed in an environment 'laden with middle class values and expectations' (Pagani et al. 1999: 1210).

While a number of overseas cross-sectional studies have shown associations between language and behaviour problems in childhood (eg Cohen et al. 1993), longitudinal studies have pointed more clearly to the role of reduced oral language competence as a specific risk factor for adverse outcomes. Beitchman and co-workers (2001, 1999) and Brownlie et al. (2004) reported that developmental language problems in boys predicted engagement in antisocial activity by 19 years of age. In their longitudinal cohort study of speech and language impaired children identified at age five, Brownlie et al. (2004) found that at age 19, there was a direct effect of childhood language impairment on late adolescent delinquency and this effect remained after controlling for verbal IQ. In considering the likely aetiological pathways at work, these workers argued that the role of language in social regulation, perspective taking and mediating interpersonal exchanges with others may account for the adverse psychosocial outcomes in boys with developmental language problems. Two Australian

longitudinal studies of large birth cohorts (Bor, McGee & Fagan 2004; Smart et al. 2003) have reported that poor language ability in the early years increases the risk of antisocial behaviour at 14 years of age. The authors of both studies have argued therefore that overcoming oral language deficits in the early years should be a focus of prevention and early intervention strategies aimed at reducing the prevalence of antisocial behaviour. In the absence of such targeted and strategic efforts (and arguably even in their presence), however, some high-risk young people will unfortunately 'slip through the net' and commit crimes that require adjudication within the youth justice system, either in the community, or in a custodial setting. By this time, however, the young person has often already left school and is both socially and economically marginalised from the mainstream. It is significant then, that large, population-based longitudinal prevention initiatives, such as the Pathways to Prevention Project in Australia (Hamel et al. 2006) have had as a central focus, the promotion of strong oral language competence in young children, in an effort to reduce the occurrence of antisocial behaviour in later childhood/adolescence.

Australian Indigenous children face elevated risks both for delayed acquisition of language and literacy (De Bortolli & Cresswell 2004) and for involvement with youth justice services (AIHW 2010). Otitis media (middle ear infection) has been reported in 50 percent of a sample of nearly 1,000 Aboriginal children in the Northern Territory and Central Australia (Morris et al. 2005), and one in four children in this sample showed evidence of a ruptured tympanic membrane (eardrum). Recurrent middle ear infections in early life result in fluctuating hearing loss, thus compromising the child's exposure to speech and song. Given that Indigenous children face the additional challenge of being educated in a second (or even third) language (Standard Australian English), this places them at particular risk with respect to oral language development (Partington & Galloway 2005). Placed alongside cultural determinants of communication behaviour (Eades 2000), these young people are particularly vulnerable in their interface with the law.

The international literature on the language skills of young offenders

Recent evidence from the United States provided by Sanger and co-workers (eg Sanger et al. 2001, 2000; Sanger, Hux & Ritzman 1999), by Bryan and co-workers in the United Kingdom (Bryan 2004; Bryan, Freer & Furlong 2007) and in Australia by Snow and Powell (Snow & Powell 2011a, 2011b, 2008, 2005, 2004a, 2004b) has highlighted that young people who become engaged with youth justice services are highly likely to have previously undetected oral language deficits. Snow and Powell (2008) for example found that over 50 percent of a community sample of young male offenders had significant deficits on measures of figurative/abstract language, sentence repetition and narrative language (story telling) skills. Importantly, these difficulties could not be accounted for on the basis of low nonverbal IQ.

One of the great risks associated with having poor auditory processing skills, a low expressive vocabulary and poor narrative language skills, is that under pressure (eg when being interviewed by a police officer), one is likely to produce monosyllabic, poorly elaborated and non-specific responses that may be accompanied by poor eye-contact and occasional shrugs of the shoulders. Such responses are likely to have a confirmatory effect on the biased impressions that many authority figures already hold about marginalised young people and result in assumptions of rudeness, apathy and poor motivation to comply with the social contract at hand (Snow & Sanger 2011).

In a recent CRC-funded study (Snow & Powell 2011a, 2011b), the links between oral language functioning and histories of interpersonal violence in an incarcerated sample of 100 young offenders were examined. Findings indicated that nearly 50 percent of the sample met clinical criteria for diagnosis of language impairment and though language scores and non-verbal IQ were correlated in the sample as a whole, this association was not present in the subgroup who were language impaired.

Further, when the subgroup (n=24) of participants with high scores on offending histories (as measured on the Cormier-Lang Crime Index; Quincey et al. 1998) were compared with the remainder of the sample, they were found to perform significantly more poorly on several language processing and production tasks. This is the first time that a link has been shown between offending patterns/severity and the presence of an oral language impairment.

Most of the research on the topic of language competence and youth offending, however, has been concerned with young males, with only modest evidence to date concerning the language skills of young female offenders. The limited evidence that does exist suggests that language difficulties may be less prevalent in females than in males; for example, Sanger and Hux (1997) reported a prevalence rate of 14.3 percent and that there are qualitative differences with respect to the types of language difficulties found in young offenders as a function of gender (Sanger, Hux & Ritzman 1999). This is an area in need of more focused research attention.

Implications

The evidence summarised here concerning young male offenders has clear implications in four key domains, which will be covered briefly below.

Early identification of 'high-risk' boys with learning and behaviour problems

As noted above, behaviour difficulties in childhood are first and foremost mental health problems, being flags for poor affective self-regulation, low empathy and poor adherence to culturally determined pro-social attitudes and behaviours. The published research to date suggests that when boys (in particular) who are at risk for behaviour difficulties enter school, they may also have unidentified oral language deficits. Such deficits will become apparent by virtue of obvious difficulties mastering the transition to literacy. Unfortunately early-years teachers are not always proficient at identifying children whose oral language skills fall below expected levels (Antoniazzi, Snow

& Dickson-Swift 2010), but children are readily identified (and subsequently managed) as 'behaviour problems' (Cohen et al. 1993). Teachers need to have a higher index of suspicion around language competence in boys who display challenging behaviour. This may require some reconsideration of pre-service teacher education concerning early linguistic competence, its vulnerability to developmental threats and its pivotal importance for the transition to literacy. Keeping all children engaged academically has significance for health and wellbeing at a community level and it is vital that educators position their work within a broader public health context.

Interventions within the youth justice system

Interventions offered to young people in the youth justice system are highly verbally mediated. Take for example widely practised, evidence-based counselling approaches such as cognitive behaviour therapy and interpersonal therapy. These are dialogue-based interventions that place considerable demands on language processing production skills. Through the medium of language, these interventions also tap important metacognitive skills, that is, 'thinking about one's own thinking', so that unhelpful beliefs can be identified and modified. Specific approaches to assertiveness, giving and receiving feedback, and managing 'self-talk' also rely heavily on verbal skills. It may be necessary, therefore, for counsellors to consider ways of decreasing the verbal load in these approaches, for example, by simplifying their own language and using visual props more deliberately to aid comprehension. Teaching everyday conversational 'scripts' that promote pro-social interactions may also be helpful. In all approaches, the amount of exposure to the intervention that is required for mastery of verbal/reasoning skills may be far greater than previously thought.

Similarly, approaches aimed at improving functional literacy skills in young offenders should be predicated on a high index of suspicion that underlying language skills may be fragile and/or incompletely developed. Speech Language Pathology assessments

of such young people would assist with identifying those core language skills that are intact, versus those that are lacking, and needing attention before more age-appropriate literacy tasks can be undertaken.

Forensic interviewing

The opportunity to 'tell one's story' to a law-enforcement officer, one's legal counsel, and/or a judge or magistrate is a basic right in a civilised society. The evidence summarised here indicates, however, that many young offenders will have difficulty providing an account of their actions that is complete, coherent and well-organised. Such difficulties expose the young person to misperceptions as to their authenticity (Snow & Powell 2004b). As with interventions for young people in the justice system, such interviews should be conducted on a high index of suspicion that language skills may be compromised. Police and other human services personnel should be specifically trained to modify the way that they ask questions/invite responses, ensuring that linguistic complexity is kept to a minimum. Ideally, a screening assessment should be carried out to identify those young people with clinically significant (yet invisible) language deficits that will compromise their performance in an interview—and consequently their access to justice in its most basic sense.

Restorative Justice Conferencing in both justice and education contexts

Restorative Justice Conferencing (RJC) has emerged in recent years as an attractive and promising alternative to traditional adversarial approaches to youth offending. This approach brings together the perpetrator (who must have pleaded guilty in a court of law), the victim(s), and a trained convenor, in order that a conversation can be had between the parties about the effect of the perpetrator's wrongdoing on the victim(s). Snow and Sanger (2011) have identified a number of concerns about the use of RJC with young offenders with unidentified language impairments and the risks this could entail for all parties—the offender, the victim(s) and for the wider community.

RJC requires the young person to listen to and comprehend sometimes complex and emotionally charged narratives delivered by people who have been affected by their wrongdoing. Information processing skills are usually more vulnerable in situations where stress levels are elevated and/or where several people are talking at once (Eysenck et al. 2007). In addition to heavy reliance on verbal processing and production skills, social cognition skills are key to the success of RJC (eg perspective taking, the ability to identify verbal and nonverbal cues about another's affective state, and to infer intended, though unspoken meaning). Marton, Abramoff and Rosenzweig (2005: 155) studied the social cognition skills of children with language impairments and found

[t]he reactions of these children reflected the tendency of often departing the scene without resolving the conflict or expecting a third person to solve the conflict in an attempt to avoid the negotiation process.

In an RJC context, this could mean excessive deferral to the mediator for communicative assistance and may create an impression of shallowness and low credibility on the part of the young offender.

The future

An evidence base for Speech Language Pathology (SLP) interventions with marginalised young people is emerging, spanning universal, targeted or specialist inputs. Examples include SLP consultation to units for young people who are excluded from school (Clegg et al. 2009) and one on one targeted interventions for identified high-risk individuals (Joffe 2006). In Australia, this means that the risks facing Aboriginal children with respect to both language and offending need to be a focus of multidisciplinary research and targeted in linguistically sensitive population-based education and intervention efforts.

That greater support is needed for vulnerable young people is empirically clear (Mackie & Law 2010). However, further progress is needed to translate this evidence into policy and everyday practice. From an economic

perspective, the cost of SLP services is modest compared with the cost of supporting a young person who might require state benefits, prison placement, public housing and mental health services over many decades (Hartshorne 2006; Snow & Powell 2008). Second only to broad-based prevention programs that strengthen whole communities, the best, most cost-efficient universal intervention is early identification in educational settings of children who are not meeting developmental targets and the use of evidence-based instruction methods in early literacy, to ensure that at-risk children are not 'left behind' at a time when they could truly benefit from services (Heckman & Carneiro 2003). It is the responsibility, therefore, of adults, not vulnerable young people themselves, to ensure that a risky start in life does not result in social marginalisation and offending.

References

- Antoniazzi D, Snow P & Dickson-Swift V 2010. Teacher identification of children at risk for oral language impairment in the first year of school. *International Journal of Speech Language Pathology* 12(3): 244–252
- Australian Institute of Health and Welfare (AIHW) 2010. *Juvenile justice in Australia: Interim report*. Canberra: AIHW
- Beitchman JH et al. 2001. Fourteen year follow-up of speech/language-impaired and control children: Psychiatric outcome. *Journal of the American Academy of Child and Adolescent Psychiatry* 40: 75–82
- Beitchman JH et al. 1999. Adolescent substance use disorders: Findings from a 14-year follow-up of speech/language impaired and control children. *Journal of Clinical Child Psychology* 28(3): 312–321
- Bor W, McGee TR & Fagan AA 2004. Early risk factors for adolescent antisocial behaviour: An Australian longitudinal study. *Australian and New Zealand Journal of Psychiatry* 38(5): 365–372
- Brownlie EB et al. 2004. Early language impairment and young adult delinquent and aggressive behavior. *Journal of Abnormal Child Psychology* 32(4): 453–467
- Bryan K 2004. Preliminary study of the prevalence of speech and language difficulties in young offenders. *International Journal of Language and Communication Disorders* 39(3): 391–400
- Bryan K, Freer J & Furlong C 2007. Language and communication difficulties in juvenile offenders. *International Journal of Language and Communication Disorders* 42: 505–520
- Catts HW & Hogan TP 2003. Language basis of reading disabilities and implications for early identification and remediation. *Reading Psychology* 24: 223–246
- Centa Y 2005. *Beginning reading: A balanced approach to the first three years instruction to literacy instruction at school*. Crows Nest: Allen & Unwin
- Clegg J, Stackhouse J, Finch K, Murphy C & Nicholls S 2009. Language abilities of secondary age pupils at risk of school exclusion: A preliminary report. *Child Language Teaching and Therapy* 25(1): 123–139
- Cohen NJ 2001. *Language impairment and psychopathology in infants, children and adolescents*. Thousand Oaks, CA: Sage
- Cohen N, Davine M, Horodeszky N, Lipsett L & Isaason L 1993. Unsuspected language impairment in psychiatrically disturbed children: Prevalence and language and behavioral characteristics. *Journal of the American Academy of Adolescent Psychiatry* 32: 595–603
- Cohen NJ, Menna R, Vallance D, Im N & Horodezky N 1998. Language, social cognitive processing, and behavioral characteristics of psychiatrically disturbed children with previously identified language and unsuspected language impairments. *Journal of Child Psychology and Psychiatry* 39: 853–864
- De Bortolli L & Cresswell J 2004. *Australia's Indigenous students in PISA 2000: Results from an international study*. Research monograph no. 59. Melbourne: ACER
- Dockrell JE, Lindsay G & Palikara O 2011. Explaining the academic achievement at school leaving for pupils with a history of language impairment: Previous academic achievement and literacy skills. *Child Language Teaching and Therapy* 27(2): 223–237
- Eades D 2000. I don't think it's an answer to the question: Silencing Aboriginal witnesses in court. *Language in Society* 29: 161–195
- Eysenck MW, Derakshan N, Santos R & Calvo M 2007. Anxiety and cognitive performance: Attentional control theory. *Emotion* 7(2): 336–353
- Fergusson D 1998. The Christchurch health and development study: An overview and some key findings. *Social Policy Journal of New Zealand* 10: 154–176
- Hardin CD & Conley TD 2001. A relational approach to cognition: Shared experience and relationship affirmation in social cognition, in Moskowitz GB (ed), *Cognitive social psychology: The Princeton symposium on the legacy and future of social cognition*. NJ: Lawrence-Erlbaum: 3–17
- Hart B & Risley T 1995. *Meaningful differences in everyday parenting and intellectual development in young American children*. Baltimore: Brookes
- Hartshorne M 2006. *The cost to the nation of children's poor communication*. I CAN talk series: Issue 2. London: I Can
- Hay I & Fielding-Barnsley R 2009. Competencies that underpin children's transition into literacy. *Australian Journal of Language and Literacy* June. http://findarticles.com/p/articles/mi_hb3336/is_2_32/ai_n32067811/pg_5/

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Heckman P & Carneiro J 2003. *Human capital policy*. Working paper no. 9495. Cambridge, MA: National Bureau of Economic Research

Hedberg NL & Stoel-Gammon C 1986. Narrative analyses: Clinical procedures. *Topics in Language Disorders* 7: 58–69

Hines PJ, Wible B & McCartney M 2010. Learning to read, reading to learn. *Science* 23(328): 447

Hommel R et al. 2006. The pathways to prevention project: Doing developmental prevention in a disadvantaged community. *Trends & Issues in Crime and Criminal Justice* no. 323. Canberra: Australian Institute of Criminology. <http://www.aic.gov.au/publications/current%20series/tandi/321-340/tandi323.aspx>

Joffe V 2006. Enhancing language and communication in language-impaired secondary school-aged children, in Ginsborg J & Clegg J (eds), *Language and social disadvantage*. London: Wiley Publishers: 207–216

Locke A, Ginsborg J & Peters I 2002. Development and disadvantage: Implications for the early years and beyond. *International Journal of Language and Communication Disorders* 37: 3–15

Mackie L & Law J 2010. Pragmatic language and the child with emotional/behavioural difficulties (EBD): A pilot study exploring the interaction between behaviour and communication disability. *International Journal of Language and Communication Disorders* 45(4): 397–410

Marton K, Abramoff B & Rosenzweig S 2005. Social cognition and language in children with specific language impairment (SLI). *Journal of Communication Disorders* 38: 143–162

Morris PS et al. 2005. Otitis media in young Aboriginal communities in northern Australia: A cross-sectional survey. *BMC Pediatrics* 5: 27

Owens RE 1996. *Language development. An introduction*, 4th ed. Boston: Allyn & Unwin

Pagani L, Boulerice B, Vitaro F & Tremblay RE 1999. Effects of poverty on academic failure and delinquency in boys: A change and process model approach. *Journal of Child Psychology and Psychiatry* 40(8): 1209–1219

Partington G & Galloway A 2005. Effective practices in teaching indigenous students with conductive hearing loss. *Childhood Education* 82(2)

Paul R 1995. Language disorders from infancy through adolescence. Assessment and intervention. St. Louis: Mosby

Quinsey VL, Harris GET, Rice M & Cormier CA 1998. *Violent offenders: Appraising and managing risk*. Washington, DC: American Psychological Association

Sanger DD, Creswell JW, Dworak J & Schultz L 2000. Cultural analysis of communication behaviors among juveniles in a correctional facility. *Journal of Communication Disorders* 33: 31–57

Sanger DD & Hux K 1997. Oral language skills of female juvenile delinquents. *American Journal of Speech Language Pathology* 6: 70–76

Sanger DD, Hux K & Ritzman M 1999. Female juvenile delinquents' pragmatic awareness of conversational interactions. *Journal of Communication Disorders* 32: 281–295

Sanger D, Moore-Brown B, Magnuson B & Svoboda N 2001. Prevalence of language problems among adolescent delinquents. *Communication Disorders Quarterly* 23: 17–26

Scott S, Knapp M, Henderson J & Maughan B 2001. Financial cost of social exclusion: Follow-up study of antisocial children into adulthood. *British Medical Journal* 323(28 July): 1–5

Smart D et al. 2003. Patterns and precursors of adolescent antisocial behaviour. *Types, resiliency and environmental influences*. Melbourne: AIFS

Snow PC 2009. Child maltreatment, mental health and oral language competence: Inviting speech language pathology to the prevention table. *International Journal of Speech Language Pathology* 11(12): 95–103

Snow PC & Powell MB 2011a. *Oral language competence in incarcerated young offenders: Exploring links with offending severity*. Report to the Criminology Research Council on Project 10/08–09. Melbourne: Monash University

Snow PC & Powell MB 2011b. Oral language competence in incarcerated young offenders: Links with offending severity. *International Journal of Speech Language Pathology*. <http://informahealthcare.com/doi/abs/10.3109/17549507.2011.578661>

Snow PC & Powell MB 2008. Oral language competence, social skills, and high risk boys: What are juvenile offenders trying to tell us? *Children and Society* 22: 16–28

Snow PC & Powell MB 2005. What's the story? An exploration of narrative language abilities in male juvenile offenders. *Psychology, Crime and Law* 11(3): 239–253

Snow PC & Powell MB 2004a. Developmental language disorders and adolescent risk: A public-health advocacy role for speech pathologists? *International Journal of Speech Language Pathology* 6(4): 221–229

Snow PC & Powell MB 2004b. Interviewing juvenile offenders: The importance of oral language competence. *Current Issues in Criminal Justice* 16(2): 220–225

Snow PC & Sanger DD 2011. Restorative justice conferencing and the youth offender: Exploring the role of oral language competence. *International Journal of Language and Communication Disorders* 46(3): 324–333

Stanovich KE 1986. Matthew Effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly* 21: 360–364

Stephenson M 2007. *Young people and offending: Education, youth justice and social inclusion*. Devon, UK: Willon Publishing