

DEVELOPMENTAL LANGUAGE DISORDERS AMONG JUVENILE OFFENDERS WITH A PARTICULAR EMPHASIS ON PSYCHOLOGICAL PROBLEMS

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Abstract

Juvenile offenders with Developmental Language Disorders often lack the right words to express their thoughts and feelings, pose serious social challenges and their behaviour is often misinterpreted, they are seen as defiant or low commitment persons. The challenges in this area are wide-ranging and, in the long term, can also make it difficult for them to integrate successfully into society after serving their sentence. Dealing with the problem can help us understand what may underlie the development of developmental language disorders and how to successfully address the problems that arise, so the long-term impact of studying the topic is unquestionable. Emphasis should be placed on the psychological difficulties that arise, as research has shown that young people with DLD have higher levels of mental health problems, self-harm and drug use. We have collected several suggestions and good practices that should be widely applied. As implications we can highlight that the key is to diagnose at an earlier age, using effective screening procedures for reading comprehension, and to address any mental health problems that may arise. The development of literacy and oral and written language skills in juvenile offenders is essential to prevent further offending, and SLPs are therefore much needed in correctional facilities. Addressing this issue properly, and providing professional support for these adolescences, is of utmost importance for the functioning of society, because it would ensure that these young people become valuable members of society and do not become involved in crime as adults.

Keywords: juvenile delinquents; verbal challenges; disorders; speech therapy

Introduction

It is crucial to examine the language and communication skills of young offenders, as the impact of gaps in this area is wide-ranging. There is a clear correlation between language skills development, academic achievement, and positive peer relations, all vital for long-term well-being (Beitchman & Brownlie, 2014). Since the impact of these youth's deficient language skills is wide-

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ranging, the problem is difficult to pinpoint and often remains undiagnosed because the screening programs are not thorough enough and therefore a thorough examination of the topic is crucial.

In our article, we introduce the features of Developmental Language Disorders and examine the key factors behind the development of language skills. We focus on the psychological difficulties that appear in the case of juvenile offenders with language disorders and highlight what difficulties these young people encounter during court proceedings, reintegration/ rehabilitation programs, and restorative justice sessions. Finally, we summarise the solutions proposed in relevant international research to improve the situation of juvenile delinquents with language disorders. This study provides ample coverage and analysis of the topic in addition to answering the research questions considering the latest scientific findings.

Developmental Language Disorders (DLD)

According to the World Health Organization (1999), communication and interpersonal competences together are one of the five areas of globally relevant life skills. Language is a fundamental component of everyday life, it gives a tool for getting around in our environment, it is essential for thriving in society, establishing relationships, and experiencing emotional and professional achievement (Chow & Wehby, 2019; Law et al., 2000).

Recently, an international consensus project has been launched to develop a uniform terminology used in the case of children and adolescents with language disorders (Bishop, Snowling, Thompson, Greenhalgh, & the CATALISE Consortium, 2017). In accordance with the common approach reached by Bishop et al., this article will employ the term developmental language disorders (DLD).

The expression DLD applies to long-term language problems that impact on a person's everyday activities and are not linked to a specific known biomedical aetiology; if a potentially associated condition, for example autism, is involved, the term "[biomedical condition] language disorder" is preferred (Bishop et al., 2017). The "developmental" description used for juveniles involved the juvenile criminal justice system is consistent with the view that the last stage of maturation of the prefrontal cortex can be placed in the mid-20s (Tamnes et al., 2017), so this population must be regarded as "work in progress" in terms of neurological development.

In the study, we will use the term speech-language pathologists (SLP) for professionals dealing with language disorders because this term captures the essence of the relevant work (speech and language) and indicates that these professionals, based on their training and clinical experience, are qualified to identify, evaluate and correct pathological conditions of communication.

It is worth delineating the different areas juvenile offenders with DLD encounter the most problems based on the research findings, as in their case we can talk about a very complex set of problems. Syntax, the precise use of morphemes, understanding abstract language (e.g., idioms, metaphors), the use of narrative

discourse can be particularly challenging for them, while they also show grammatical immaturity compared to their non-criminal peers. These young people find it more difficult to participate in general conversation, it is more challenging for them to convey information to another person (Snow & Powell, 2004, 2005; Sanger et al., 2001, 2019), they are often unable to correctly interpret texts that are meant figuratively rather than literally, they struggle with finding words due to their poor vocabulary and often cannot find the right words to express their thoughts and feelings (Snow & Powell, 2011).

Receptive and expressive language skills are an important pair of terms, which refer to various ways of language use (Larson & McKinley, 1995). Receptive language skills refer to comprehension and reception, and expressive language skills refer to expression and speaking skills. In international literature on reading, there is a broad consensus that receptive and expressive oral language skills constitute the basis of the development of literacy skills (reading, writing and spelling) in the first three years of primary education in the case of children of typical development (Snow, 1983; Snow, 2016) and in the case of children with developmental language difficulties (Nation, Clarke, Marshall, & Durand, 2004).

Several studies have found that juvenile offenders experience greater difficulties in receptive language skills than in expressive language skills, and receptive language skills are more impaired than expressive language skills in the case of juvenile offenders (Bryan, 2004; Bryan et al., 2007; Gregory & Bryan, 2011; Hughes et al., 2017). This might explain why language disorders are not diagnosed and not treated in this group (Sanger et al., 2002; Snow et al., 2016).

Receptive language disorders are therefore less noticeable than expressive language disorders and can result itself in forms of behaviour considered as impolite and non-cooperative, for example avoiding of eye contact, limited language use and body language, poor attention and attentiveness, elevated fidgeting, and using one-word replies in conversations (Gregory & Bryan, 2011; Martin, 2019; Snow et al., 2016; Winstanley et al., 2018). Therefore, juvenile offenders may appear to show no remorse for their crimes because of their unrecognized receptive language disorder. Expressive language difficulties can also be a factor in misjudgement, as the young person may not be able to communicate in a way that coherently creates narratives that reflect their point of view and emotions because of the difficulty in creating the complexity of the verbal language required for such tasks (Anderson et al., 2016; Snow & Sanger, 2011). Furthermore, weak expressive language abilities are found to be related to problems with affective self-regulation (Ripley & Yuill, 2005). This can be reflected in attitudes and behaviours that show a lack of interest, aggressiveness or resistance to peers (Morrison et al., 2010; Rotaru, Pretula, & Boncu, 2013). These behaviours can overwhelm the language needs of young people (Bryan et al., 2015; Hughes et al., 2017; Martin, 2019), resulting in language disorders going undiagnosed and/or left without treatment. In this context, Wolff and colleagues concluded that receptive measurement is indeed

the best predictor of the level of antisocial conduct of juvenile offenders (Wolff et al., 1982).

There is now compelling international proof of the linguistic and literacy vulnerability of juvenile detainees (mainly males) (Anderson, Hawes, & Snow, 2016). There is a disproportionately large number of juvenile offenders who display poor academic results and learning deficiencies (Snowling et al., 2000; Krezmien et al., 2008), verbal language disorders (Anderson et al., 2016) and often live their lives with learning disorders (Grigorenko, 2006), and behavioural and emotional disorders (Quinn et al., 2005), but it is common knowledge that there is great variation in the population. Several juvenile offenders have been temporarily or finally dismissed from school, which it puts them in the company of peers who have also been dismissed from school due to their antisocial behaviour (Thornberry et al., 2003).

In addition to potential lack of success in education, deficits in language and communication skills can have wide-ranging effects, including communication difficulties in peer and family relationships, a more difficult access to work, and problems in psychotherapy interventions (Chitsabesan et al., 2007). The complexity of the situation is clearly attested to by the fact that - as was found in the longitudinal study carried out by Clegg et al. (2005) - one child in three with language development difficulties also suffers from mental health problems, which in some cases resulted in involvement in crime.

These emerging difficulties are perhaps not unexpected if we examine them alongside the complex biopsychosocial risks affecting this population, because the development of language skills is closely related to the familial environment and parents' education, as we have shown in detail in next chapter. What is somewhat surprising, however, is that, until recently, speech therapy as a profession has relatively neglected the communication needs of juvenile offenders.

Theoretical background: the role of socio-economic status

Juveniles suffering from DLD are typically socially and economically disadvantaged, as the vast majority of young people sent to correctional institutions come from "crime-prone communities" (Weatherburn, 2011). This phenomenon has been addressed by many studies, for instance Australia (AIHW, 2017), in the United States (Office of Juvenile Justice and Delinquency Prevention (2015) and the United Kingdom (Stephenson, 2007). The socio-economic status (SES) of individuals and households is usually examined primarily in the context of parental schooling and economic variables like family incomes (Duncan, Daly, McDonough, & Williams, 2002). Willingham (2012) stressed the role of human capital and social capital alongside economic capital for families, where human capital describes the abilities or knowledge of persons, typically in terms of their level of education and social capital describes beneficial relationships in social networks, for example, those with financial or human capital.

Clearly, such assets have both genetic and environmental components and represent multiple biopsychosocial drivers of well-being and health. Indeed, such factors are interdependent, and in the complex ecology of human communities it is rather difficult to disentangle the influence of genetic endowments, social and physical environment, life experiences, parental values, ethnicity, and economic well-being on socio-economic status. However, it is clear from the literature that juveniles in the justice system worldwide are characterized by a disproportionately high level of psychosocial and economic disadvantages and indicators of the risk of unfavourable life prospects.

The formation and development of language skills is closely related to parent-child bonding, is influenced by the socio-economic status, as well as parenting techniques and the level of education. Children in secure bonding relationships have greater competence in language skills than those in insecure relationships (van IJzendoorn, Dijkstra, & Bus, 1995). Socioeconomic status is positively related to language development, and children from lower SES families are more likely to have language disorders than their peers from higher SES families (Justice et al., 2008; Qi et al., 2003). According to research findings, low SES is associated with patterns of parent-child interaction, for example lack of discipline, inappropriate parenting techniques and reduced levels of effective supervision, which may be linked to crime (Sampson & Laub, 1994; Sousa et al., 2011). In addition to interaction patterns, low SES is related to parental level of education and the development of the young children's vocabulary (Qi et al., 2006), as parents with higher educational levels and more financial support typically talk more with their children than parents with less education and fewer resources (Rowe, 2012). With respect to the correlation between education and SES, we can conclude that children living with parents with lower educational levels may have a higher rate of language disorders, as they may encounter fewer new words and hear fewer complex sentences during conversations (Qi et al., 2006).

Therefore, for speech therapy as a profession, SES and the social environment are of particular importance in relation to juvenile offenders, as they show a close connection with the language status of children and adolescents, but at the same time, the situation is made more complex by the fact that we can have an assumable genetic component as well (Bergen, Zuijen, Bishop, & Jong, 2017). Almost three decades ago Hart and Risley (1995) reported that the children of skilled and more highly educated parents encounter richer adult language both quantitatively and qualitatively than children of working-class parents and parents living on social benefits. Similar results were obtained by other American researchers (Hoff, 2003), as well as specialists working in the United Kingdom (Locke, Ginsborg, & Peers, 2002). Chitsabesan et al.'s research in 2007 found a statistically significant correlation between poor verbal skills and low IQ values in the case of many young people who participated in their study, and neurocognitive deficits were typically associated with the low levels of language skills.

Psychological problems of juvenile offenders with DLD

Although the higher rate of language difficulties among juvenile offenders is evident, research among this population seldom provides a comprehensive overview of the wider psychological risk factors for juvenile delinquents. Researchers have now established the higher level of mental health problems (Chitsabesan et al., 2006), self-harm (Putnins, 2005) and drug use (Hammersley, Marsland, & Reid, 2003) among juvenile detainees.

The proportion of different types of neurological disability is higher in this population, comprising intellectual disability, traumatic brain injury (TBI), and autism spectrum disorder (ASD) (Hughes et al., 2012). Studies of youth with language disorders have also revealed comorbidity with mental health problems (Im-Bolter & Cohen, 2007), anxiety (Beitchman et al., 2001), and substance abuse (Beitchman et al., 2001).

In parallel with frequent comorbidities, risk factors for example exposure to early abuse and neglect are also found to be overrepresented among juvenile offenders (Stewart, Livingston, & Dennison, 2008). This in fact poses a risk in itself, that threatens early language development and school engagement (Lum, Powell, & Snow, 2018; Snow, 2009). These factors, combined with socio-economic disadvantage and early exposure to abuse, may create a "perfect storm" that acts against the achievement of ideal language and reading skills. This idea was developed by Bryan, Garvani, Gregory, and Kilner (2015), who outlined a 'complex risk' model of juvenile delinquency.

Child abuse is considered in the broader framework of adverse childhood experiences (ACEs) (Baglivio et al., 2014). ACEs are crucial to the language skills of juvenile offenders as they act against the development of a caring, child-centred interpersonal milieu that promotes language skills and the development of empathy, emotional self-regulation and getting emotionally attuned at the same time (Cohen, 2001; Snow, 2009). ACEs occur cumulatively and are overrepresented in the background of juveniles who appear in the correctional system, compared to the lives of them whose trajectories do not lead to formal contact with the law (Baglivio et al., 2014).

The language problems of people with DLD can have a significant impact on participation in everyday interactions with others (Bishop et al., 2017). The reason for this is that language impairments can decrease the ability to initiate and maintain social interactions with peers, which makes social interactions with other people more difficult (Im-Bolter & Cohen, 2007). Issues related to higher-level language skills, for example difficulty in narrative discourse, inadequate drawing of conclusions, and challenges in understanding texts with figurative meaning very often led to misunderstandings and problems in social relationships (Anderson et al., 2021; Im-Bolter & Cohen, 2007). Persistent communication impairments can heighten feelings of aloneness, as well as lead to increased irritability and aggression (Speech Pathology Australia (SPA), 2018), which exposes people at increased risk of comorbid psychiatric disorders, including the appearance of both internalizing (e.g., depression,

anxiety) and externalizing (e.g., misconduct, ADHD, drug use abuse) mental health problems.

Many risk factors and problems related to language disorders and internalizing and externalizing mental health overlap, including genetic effects, social disadvantages and abuse (Hentges et al., 2021; Penner et al., 2011).

In their study, Zupan et al. (2021) strove to investigate the association between internalising mental health and language disorders. As a result of their research, they concluded that the two occur comorbidly, but no significant correlation can be discovered between them. At the same time, the examination of the problem contributes to a better awareness of the potential association between language disorders and internalizing mental health problems, which can also help enhance the quality of services provided to young people. Consistent use of speech therapy could help alleviate the challenges faced by juvenile inmates with language disorders and internalizing mental disorders. Access to speech therapy services is still limited in the juvenile justice system (Martin, 2019; Snow, 2019), but some form of mental health services or counselling is usually available (Penner et al., 2011). Until speech therapy services become common practice in correctional facilities, training and educating staff on how to modify the language they use in counselling/mental health services and in day-to-day interactions with juvenile offenders can be of great help, as well as making them more effective in programs organized for them, ensuring the highest degree of commitment of young people (Gregory & Bryan, 2011; SPA, 2018).

The role of language skills in three specific areas for juvenile offenders: legal proceedings, programmes to reduce reoffending in prison, and restorative justice meetings

Oral language competency, or adequate speaking skills, is essential for juvenile offenders to participate successfully in court proceedings, programmes to reduce reoffending in prison, and restorative justice conferences (Moseley et al., 2006).

Legal proceedings

Encounters with the court system expose young people to various experiences that draw heavily on expressive and receptive language skills (Anderson et al., 2016; Bryan et al., 2007). Language impairment can be a source of many problems for juveniles in the police, court, and justice system because it negatively affects their capability to catch what they are being charged with, to clearly explain what happened in their statements to the police, to respond questions in court and to interpret the information given to them by their legal representative (Lount et al., 2017; Johnston et al., 2016; Snow et al., 2016). Their poor social and pragmatic skills have a negative impact on their dialogue with authorities, as poor non-verbal communication (e.g., eye contact) and misunderstanding of information and signals given by the speaker can be misinterpreted as 'rudeness and wilful noncompliance' (Hughes et al., 2017).

Young people with receptive language disorders may have problems in understanding the vocabulary used in legal interviews, interrogation and during

advocacy (Rogers et al., 2008; Snow, 2019), while young people with expressive language disorders may have had problems responding appropriately during verbal interactions in interrogation processes (Anderson et al., 2016; Snow, 2019).

Several studies have assessed the language skills of juvenile detainees in terms of their understanding of crucial legal vocabulary, such as the difference between 'warning' and 'punishment' (Sanger et al., 2001) or examining their comprehension of longer spoken texts (Gregory & Bryan, 2011; Winstanley et al., 2019). Snow and colleagues (2012) examined the expressive language skills of juvenile detainees. Constructing a narrative, narrating a narrative, or recounting an event is essential for successful participation in a legal proceeding; an interrogation, court testimony, or deposition all require the participant to communicate persuasively (Snow et al., 2012). Several studies have also highlighted that these skills are often lacking in juvenile offenders, which can challenge young adults (Hopkins et al., 2018; Snow & Powell, 2005). Lount et al. (2017) found that the young people in their sample felt helpless and frustrated during the court process as they had difficulty understanding what was happening around them, preventing them from actively participating.

Rehabilitation programmes

Intervention and post-offender rehabilitation programmes for juvenile offenders in correctional facilities (for example cognitive behavioural therapy; interpersonal skills development; life skills programmes; conflict resolution-focused programmes) are primarily language-based, usually relying heavily on verbal language (Snow & Powell, 2012).

Adequate speaking skills are essential for effective participation in these programmes (Bryan & Gregory, 2013), as such programmes generally require participants to have speaking and listening skills above GCSE level (Davies et al., 2004). These programmes require metacognitive skills (Snow et al., 2016), and as they typically develop soft skills such as life skills (Snow et al., 2012), appropriate language skills are essential, including complex and abstract language (RCSLT, 2018). Deficits in these areas in youth are problematic because youth with language impairment may be unable to access verbally mediated therapy (Anderson et al., 2016; Bryan et al., 2007).

Bryan found that 40% of participants in these programmes had difficulty utilising the knowledge and skills acquired in anger management or drug rehabilitation sessions (Bryan, 2004). Coles and Murray pointed out that juvenile offenders may also have problems attending educational programmes required by their court order (Coles & Murray, 2015). Winstanley (2018) found that DLD was the most significant predictor of whether juveniles would re-offend, providing strong evidence that the ineffectiveness of rehabilitative interventions may compromise reintegration into society for juveniles with language impairment.

Restorative justice approaches

Low communication skills are an equally important burden in restorative justice approaches, where language skills such as conversational management, inference, and narrative discourse are particularly important.

Successful participation in restorative justice deliberations requires the juvenile offender to (1) give a coherent account of the event, including a description of the reasons for his or her actions; (2) actively listen to the victim's account of how the event affected him or her, including interpreting non-verbal (emotional) cues; and (3) respond appropriately to the victim's story (Hayes & Snow, 2013; Sanger et al., 2013; Snow & Sanger, 2011). In these sessions, the juvenile offender must acknowledge the harm, take responsibility for and explain his or her actions, and develop solutions to mitigate the harm to the victim (Martin, 2019) in challenging and stressful circumstances (Lount et al., 2017). The juvenile must listen to and understand victims' complex, emotionally overwrought narratives (Snow & Sanger, 2011), which places high demands on the offender, with increased strain on focus, attention, memory, and language processing (Snow et al., 2012; Snow & Sanger, 2011; Winstanley et al., 2019).

They need to understand and use vocabulary related to emotions (Snow et al., 2016) and be aware of specific concepts such as peer influence or victim awareness (Hopkins et al., 2018). They need to answer questions and provide information (Malhotra et al., 2013), and "formulate their ideas into a coherent narrative that is judged as adequate and authentic by the parties affected by the wrongdoing" (Hayes & Snow, 2013, p. 2).

Suggestions for solutions to deal with language disorders in juvenile offenders

Considering the high proportion of young people with DLD who commit crimes, it is crucial to screen the language skills of potentially affected young people as early as possible. It would be reasonable to carry out these tests when there is some sign of a disturbance in the young person's life, such an indication can be the appearance of several different difficulties either with learning or building relationships with peers. Hughes and Benasich and their colleagues recommend screening for language skills in the following situations, in order to prevent affected young people's potential subsequent involvement in crime: among children with reading difficulties; when behavioural problems in establishing relationships with peers and communication for the first time appear; when the child is at risk of being excluded from school, and when mental health problems occur (Benasich et al., 1993; Hughes et al., 2017). Early diagnoses enable earlier and more appropriate intervention, even before dropping out of school and committing crimes, while early speech therapy services for children identified with DLD can reduce the chance of contact with the police in adolescence and early adulthood (Hughes et al., 2017; Winstanley, Webb, & Conti-Ramsden, 2018).

Unfortunately, screenings for juvenile offenders are not frequent enough, so the occurrence of previously unrecognized and undiagnosed language

disorders is substantial, and therefore affected young people in many cases do not even receive adequate professional support (Beitchman et al., 1999; Snow & Powell, 2011). Another problem is that the behaviour of the young people affected due to language disorders is often misinterpreted, they are seen as defiant or low commitment persons, and behaviour problems are assumed to be the reason behind their underachievement in the classroom environment (Cohen et al., 1998; Snow & Powell, 2011).

Professional literature also highlights the need for effective reading comprehension screening procedures that lead to targeted interventions adapted to assessment profiles (Ehren & Ehren, 2001; Snow, 2016). However, several problems arise in relation to the examination of young people's language abilities. Most of the tests used were originally designed for children, and the standards of the tests do not necessarily reflect the "typical" performances of young people who are alienated from education, may attend school less often, and have limited social experiences (Bryan et al., 2007). Several authors have suggested that it would be more appropriate to use self-reports and interviews so that young people can report on their experiences and explain their emotional reactions to them (Zwiers & Morissette, 1999). Freedman and Wiig (1995) believe that self-assessment would provide useful information for the design of services and interventions for young people, moreover, according to some experts, they would represent an alternative to the exclusive use of standardized tests (Ehren, 2000).

It would be important to make speech therapy and language pathology services accessible to at-risk young people who do not attend school (Bryan et al., 2007), given the high comorbidity rates of DLD and reading difficulties, so the provision of speech therapy and language pathology services should be ensured by youth assistance and social and child protection organizations for the young people involved.

If young people do become offenders and are convicted, it becomes essential to develop literacy as well as oral and written language skills to prevent further offending, so there is a great need for SLPs in correctional institutions (Venard et al., 1997).

Such specialists are employed more and more often, but their involvement is not uniform in individual institutes, and can be considered rather sporadic, and the services provided by these specialists are not available in many institutions.

If SLPs work in the given correctional institution, in addition to dealing with the juveniles and providing them with therapy in addition to screening, they perform versatile tasks in order to support easier communication with the juveniles.

A great number of tools are applied to support young people in engaging more successfully in interactions, including training staff to facilitate communication (Bryan & Gregory, 2013; Royal College of Speech and Language Therapists [RCSLT], 2019). In addition to training staff, SLPs also play an important role in supporting the exchange of information with juveniles.

Communication is a basic human right, and it is not fair to condemn youth to failure (e.g., for breaking the rules) just because they could not fully understand what the authorities expected of them at the outset. Therefore, SLPs assist in developing understanding of commonly used institutional vocabulary, including the creation of printed materials for juveniles that explain justice processes in a user-friendly manner (such as the meaning of terms used in bail conditions), youth rights, basic rules of conduct and prepare them for what to expect during their sentence.

Snow and Powell (2012) recommend that staff and counsellors reduce the verbal burden of cognitive behavioural therapy by, for example, simplifying the language used and that they also use visual support, that is, the routine use of communication aids, such as pictures during rehabilitation interventions.

Riley and Hayes (2018) provide advice based on their observations of restorative justice deliberations. They recommend that the facilitator avoid the use of jargon and technical terms, respond to different cultural communication styles, phrase questions in a way that encourages active behaviour and contribution from the juvenile, allow for listening, and talk about the offences and actions in a way that distances them from the juvenile. They suggest that *“more emphasis should be placed on the facilitators’ language skills in engaging juvenile delinquents into conversation”* through strategies, e.g. *‘active listening, reflecting, summarising, and using silence, and that rather than expecting juvenile offenders to produce a narrative, a framed set of questions to explore cognition and emotions may be more helpful’* (Riley & Hayes, 2018, p. 109).

The role of visibility and accessibility of speech and language therapy expertise is therefore enhanced, not only during screening and therapy but also by supporting easier communication between professionals. This is also true of police and court proceedings, in addition to the time spent in prison, as young offenders need to communicate correctly during the proceedings and represent their interests. The question arises of how efficiently these juveniles with below-average language skills communicate and whether this level of language skills affects their ability to benefit from verbally delivered activities. (Bryan et al., 2007) In the next chapter, we examine the role of language skills in three specific areas for juvenile offenders.

Conclusions

As evidenced by this study, research in the field of language disorders is largely aimed at exploring the effects of DLD and the associated risks (Beitchman et al., 2001; Putnins, 2005; Snow, 2009). There are much fewer studies on the development of language skills, and only a few researchers investigate the effectiveness of language facilitation techniques, and the use of situational tasks aimed at improving such techniques (e.g., Starling et al., 2012). Our study fills a gap in research in this area, as it provides practical suggestions on what to focus on when working with adolescences delinquents with DLD in

juvenile institutions. However, there is an emerging small but positive body of literature supporting the role of speech therapy in addressing the communication needs of incarcerated youth. Gregory and Bryan (2011) in the United Kingdom and Snow and Woodward (2017) in Australia have demonstrated that such young people show a strong commitment to therapy and achieve significant communication development because of relatively short-term, moderate-intensity speech therapy interventions. In addition, the research on correctional interventions for incarcerated youth provides promising evidence that, in addition to explicit learning, the development of reading comprehension skills, reading fluency and vocabulary are crucial (Houchins, Jolivet, Krezmien, & Baltodano, 2008). In our study, we collected many suggestions and positive practices, which would be practicable to apply as widely as possible. Diagnosing language disorders at an early age and applying more effective reading comprehension screening procedures are the first step in this process, while reducing latency would be key. In practice, it would be useful to develop an understanding of the official vocabulary often used in institutions, either by creating printed materials for juvenile detainees or by simplifying the language used by professionals, and the treatment of mental health problems should not be neglected either. Furthermore, it may be worth considering the application of observations from the wider literature on juvenile offenders with DLD (Sowerbutts et al., 2021), and evidence-based interventions with young people in the criminal justice system are also needed.

The main significance of our study is that we have collected and analysed the most common problems and challenges faced by juvenile offenders with DLD. We have detailed the areas in which it may be possible to prevent juvenile offenders with DLD from reoffending after their release. With the help of research and interventions based on it, it would be possible to ensure that the developmental difficulties that arise can be remedied and that these young people become useful members of society and do not get involved in criminal activities as adults.

Ethics statement

This study was carried out in accordance with the recommendations of Code of Ethics of the University of Debrecen. The protocol was approved by the Ethics Committee for Research, Institute of Educational Studies and Cultural Management. In accordance with the Declaration of Helsinki, all parents gave written informed consent for adolescents' participation in the study.

Conflicts of interest

The authors declare no conflict of interest.

Author contributions

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

Funding

This paper was supported by the János Bolyai Research Scholarship of the Hungarian Academy of Sciences (BO/00099/24/2).

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Received January 9, 2025

Revision April 8, 2025

Accepted April 10, 2025