International Communication Project

The Importance of Speech, Language and Communication to the United Nations Sustainable Development Goals: A Summary of Evidence

The International Communication Project includes the following organisations:

American Speech-Language-Hearing Association

IASLT

New Zealand Speech-language Therapists' Association
Te Kāhui Kaiwhakatikatika Reo Kōrero o Aotearoa

Royal College of Speech & Language Therapists

SAC OAC
Speech-Language & Audiology Canada
Orthophonie et Audiologie Canada
Communicating care | La communication à coeur

Speech Pathology Australia

internationalcommunicationproject.com

Authors and citation:
Najmul Hussain (Royal College of Speech and Language Therapists), Caroline Jagoe (Irish Association of Speech and Language Therapists), Robert Mullen (American Speech-language Hearing Association), Aoife O'Shea (Irish Association of Speech and Language Therapists), Dean Sutherland (New Zealand Speech-language Therapists' Association), Cori Williams (Speech Pathology Australia) and Meredith Wright (Speech-Language & Audiology Canada/Orthophonie et Audiologie Canada).

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The International Communication Project

Launched in 2014, the International Communication Project (ICP) advocates for people with communication disability (associated with speech, language and communication impairments), as well as their families, caregivers and communication professionals. The ICP highlights the importance of human communication and how communication impairments significantly impact every aspect of life.

The ICP is built on the premise that communication is vital to life; yet is too often ignored as a disability. The World Health Organization's World Report on Disability estimates that roughly one billion people around the world are living with some form of disability. However, the authors of the report acknowledge that people with communication disability may not be included in this estimate, despite the fact that they encounter significant difficulties in their daily lives.

The ICP joins organisations from around the world in advocating for people with communication impairments and raising the profile of communication disabilities.

Executive summary

Communication disability affects millions of lives across the world, yet its impact is too often ignored. The United Nations Sustainable Development Goals have, for the first time, provided an impetus for a global effort to address this formidable reality.

This report was prepared by the ICP to demonstrate the need to address communication disability as part of any effort to deliver the United Nations' Sustainable Development Goals (SDGs), particularly SDG 1 (End poverty in all its forms everywhere), SDG 3 (Ensure healthy lives and promote well-being for all at all ages) and SDG 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all).

The ICP recommends the following activities to support such efforts:

- Seek collaboration between the World Health Organization, other relevant international agencies and the International Communication Project, which stands ready to participate in and assist with joint efforts that foster awareness and understanding of the scope of communication disability globally.
- Promote early intervention for communication disabilities to reduce negative outcomes such as poverty, poor health, and limited access to education.
- Support the development of speech and language therapy and audiology services and professions across countries where these services may not yet exist.
- Fund professional education in developing countries with a particular emphasis on developing culturally and linguistically appropriate care.
- Fund research to determine the global scope of communication disability.

Communication Disability

When we refer to people with communication disability, we refer to people with speech, language and communication impairments; which are difficulties communicating with others in their preferred language, and therefore does not include the Deaf community, a cultural linguistic minority group. For some people these impairments may be minor and temporary, whilst for others their needs are complex and long term. The difficulties may be developmental (present from birth) or acquired later in life (as a result of disease or injury). For the purposes of this report, we also include children whose pre-school language experiences differ from those expected within the education system. These differences lead to increased need for support in acquiring the language skills which underlie literacy development.

Speech refers to saying sounds accurately and in the right places in words of a language or dialect. It relates to speaking fluently, without hesitating, prolonging and repeating words or sounds. It also means speaking with expression; using appropriate voice, pitch, volume and intonation for the person's culture, language, and dialect.

Language refers to the learned system of words or signs used to express and understand meaning, also encompassing the rules for combining them to form sentences and longer texts (such as stories and instructions). Language allows us to interact, to share ideas and to express wants and needs, and can be spoken, written or signed.

Communication refers to how we interact with others; being able to talk to people and take turns as well as using appropriate language to suit the situation. It includes non-verbal communication such as eye contact, gestures and facial expressions. In addition, communication relates to being able to consider another person's perspective, intentions and the wider social context. For those who are unable to communicate using spoken language, alternative means of communication may be used. These include low tech (e.g., picture-based communication books or boards) or high tech (e.g., speech-generating devices) systems.

Prevalence and co-morbidities

As outlined throughout this document, communication disability is prevalent in all communities, particularly those with low socioeconomic status. While global estimates may vary, 50 to 70% of children living in impoverished communities in many developed economies have communication impairments (Stoke Speaks Out, 2006; Locke et al., 2002; Canadian Institute for Health Information 2014; Reilly, Harper & Goldfeld, 2016). Statistical data from developing economies is limited; however it is unlikely that the prevalence of communication impairments in these contexts would be lower than those reported in developed countries.

Co-morbidities

Communication disability can occur for a number of reasons and can exist in isolation, alongside or as part of other impairments.

It is important to note that people diagnosed with disorders such as Autism Spectrum Disorder (ASD) and learning difficulties, and people with acquired neurological conditions such as stroke and neurological degenerative disorders will often have some form of communication disability associated with their condition. There is an increased risk of communication disability within young people with Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorders, Social Emotional Behavioural Difficulties (SEBD) and dyslexia. Communication disability is common in people diagnosed with disorders later in life, including those with dementia, brain injury and other degenerative neurological disorders.

Hearing loss

Hearing is critical to speech and language development, communication and learning. Hearing loss may be temporary or permanent, varying in severity from mild to profound; unmanaged hearing loss in children causes delay in the development of verbal speech, language and communication skills (Joint Committee on Infant Hearing, 2007). Without appropriate intervention (such as provision of hearing aids and/or appropriate education opportunities) hearing loss can affect employment, education and well-being (Järvelin, Mäki–torkko, Sorri, & Ratnakallio, 1997). Hearing loss increases in prevalence as people age, and can greatly affect quality of life (World Health Organization, 2018).

Communication disability and the Sustainable Development Goals

In 2017 and 2018, the United Nations reported progress towards achievement of the Sustainable Development Goals. The reports highlighted the breadth of the challenge faced by the international community to both implement and meet the targets for each goal (United Nations 2017; 2018b). Globally, progress is being made to achieve the targets set within each goal; however this will be strengthened by addressing communication disability as part of these endeavours.

Communication disability should be a consideration for the three most people-centred SDGs:

- #1. End poverty in all its forms everywhere; 11% of the global population live in poverty. In 2013 an estimated 767 million people were living below the international poverty line of US$1.90 a day (United Nations, 2018a). Escaping the poverty cycle is more difficult for people with communication disability.
- #3. Ensure healthy lives and promote well-being for all at all ages; healthcare is not accessible for many. Communication disability affects well-being. Access to health care is more difficult for people with communication disability.
- #4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all; access to quality education remains a challenge for many. Access to quality education should be understood to encompass the language skills needed for literacy and learning. Communication disability affects these skills.

Individuals with communication disability are often some of the most vulnerable in society, with children and adults with communication disability generally having poorer academic, vocational, social and health outcomes than others (ICAN & RCSLT, 2018). The vision articulated in the 2030 Agenda for Sustainable Development (United Nations, 2015, p.7) of a “just, equitable, tolerant, open and socially inclusive world in which the needs of the most vulnerable are met” therefore requires that communication disability is addressed in any and all attempts to implement the SDGs.

Poverty and communication disability

Research has demonstrated a correlation between the levels of communication disability present in communities and socioeconomic status. In the UK, 7.58% of all children (2 in every classroom of 30 children) present with a developmental language disorder, not linked to another condition, which affects the way they understand and express language. While this occurs regardless of socioeconomic status, prevalence rates are likely to be higher in areas of the country with increased socioeconomic disadvantage (Norbury et al., 2016); a project in Stoke (UK) found that over 70% of children from areas of socioeconomic deprivation started school with language impairments (Titley, Shered, Difusco & Convey, 2006). Also in the UK, the Bercow: 10 Years On Review (ICAN & RCSLT, 2018) identified much higher levels of speech, language and communication needs among communities of lower socio-economic status, with up to 50% of children from these areas starting school with a form of communication impairment (Locke et al., 2002), 10% of whom experienced long-term persistent difficulties. These findings were echoed in an Australian study, which reported communication impairments were twice as prevalent in areas of social disadvantage (Reilly, Harper & Goldfield, 2016).

A comparative analysis of outcomes relevant to early learning in the USA, Australia, Canada and the UK also found large differences in cognitive outcomes between children from disadvantaged and advantaged backgrounds, in all countries. These differences were of similar magnitude across countries, with children from higher socioeconomic backgrounds outperforming those from lower socioeconomic backgrounds (Bradbury, 2011). In both Canada and Australia, lower income levels were associated with higher developmental vulnerability, particularly in communication and general knowledge (Canadian Institute for Health Information, 2014; Reilly, Harper & Goldfield, 2016). In fact, low socioeconomic status was one of three factors that predicted poor language outcomes in Australian children at four years of age (Reilly et al., 2010). Longitudinal studies have produced similar results; living in an area of concentrated disadvantage at age five to six has a negative effect on children's reading comprehension outcomes seven years later (Lloyd, Li, & Hertzman., 2010).

Hearing loss also contributes to communication disability in areas of low-socioeconomic status and in developing countries. Studies have shown that families living in poverty are at higher risk of having children with hearing loss (Currie, 2008). An Australian study of Aboriginal communities, where social disadvantage is well established (Australian Bureau of Statistics, 2011), highlighted the frequency with which otitis media (middle ear infection) and conductive hearing loss occurred in children under the age of one, with many having repeat episodes (Williams & Jacobs, 2009). Conductive hearing loss can impact and delay the acquisition of speech and language (Tomblin et al., 2015) while early onset otitis media and conductive hearing loss is associated with increased risk of long term speech/language problems (Williams & Jacobs, 2009). Chronic suppurative otitis media (CSOM: a condition associated with ongoing middle ear infection and perforation of the ear drum) is more common in developing countries (Acuin, 2004). In Nigeria, CSOM has been shown to be more common in children living in poverty (Lasisi, Sulaiman, & Afolabi, 2007).

Communication disability is associated with long term disadvantage. A study conducted over a 20-year period found children with pervasive language problems were more likely to live in economically disadvantaged circumstances (Beitchman et al., 1996), and that at age 25, these young adults had lower occupational status than their peers (Johnson et al., 2010). Marmot et al. (2010) found that social disadvantage also leads to poorer health outcomes.

Individuals with communication disability and their families are often placed at an economic disadvantage since employment opportunities are impacted by communication disability, for the individual and their caregivers. Families of children with intellectual disability fare worse than other families when compared on economic measures such as living in poverty, living in socially deprived locales, and rates of homeownership (Emerson, 2003).

For people with acquired communication disability, return-to-work is significantly impacted by the nature of the communication impairment. Employers and service providers perceive psychosocial and environmental factors as barriers for people with communication disability returning to employment (Garcia, LaRoche & Barrette, 2002). The presence of aphasia (the complete and/or partial loss of language post-stroke) puts

individuals at a particular disadvantage, with people who have aphasia post-stroke being less likely to return to work than those who don't have aphasia (Black Schaffer & Osberg, 1990; Graham, Pereira, & Teassell, 2011). Similarly, a study in Japan showed that having no aphasia post-stroke was a significant predictor of return-to-work for both white and blue collar workers (Tanaka, Toyonoga, & Hashimoto, 2014). In adults with traumatic brain injury, social communication difficulties have been found to be an “important source of employment vulnerability” (Douglas, Bracy, & Snow, 2016, p8). Communication difficulties in elderly patients have been associated with caregivers reducing their hours in paid employment (Covinsky, et al., 2001).

Access to services to address communication disability may be affected by poverty or location. An Australian study identified a lack of services for low socioeconomic and remote/rural-based populations (McCormack & Verdon, 2015). In this study, 20% of children in 27 communities were identified as developmentally vulnerable in language and cognition yet had no recorded access to speech and language therapy services. In Canada, First Nations peoples have voiced their concerns about the lack of availability of speech-language pathology and audiology services, particularly for children with special needs living on-reserve (Vives, Sinha, Burnet, & Lach, in collaboration with Pinaymootang First Nation, 2017). Across Africa, in numerous countries, a lack of availability has also been recorded (Wylie, McAllister, Davidson & Marshall, 2013).

Health and communication disability

Implementing sustainable development goal 3, ensuring health and wellbeing for all, necessitates consideration of the accessibility and responsiveness of the health system to those with communication disability.

People with communication impairments often require more frequent interactions with health services, but may have greater difficulty accessing these services, and may be more vulnerable during some healthcare encounters. Language difficulties in children have been found to be associated with substantial excess population healthcare costs, which are in addition to the known broader costs incurred through the education system (Sciberras et al. 2015).

A study from the USA demonstrated children with impairments that would lead to communication disability (such as hearing loss and neurological conditions) had a two to eight times increased likelihood of having: more than nine health care visits; a surgical or medical procedure; a recent visit to a medical specialist; a visit to a mental health professional; a visit to an allied health professional; and/or a visit to an emergency department (Boulet, Boyle, & Schieve, 2009).

An Australian study found hearing loss at all levels to be associated with poorer physical and mental health compared to population norms (Hogan, O'Loughlin, Miller, & Kendig, 2009). Children with hearing loss have also shown elevated prevalence across most dimensions of emotional and behavioural difficulties; and on indicators of communication disorders, language and cognitive development, and motor skills. Increased difficulties understanding others (poor receptive language skills) were predictive of increased psychosocial difficulties in children with hearing problems (Hogan, Shipley, Strazdins, Purcell, & Baker, 2011). A Korean study found adults with moderate to severe hearing impairment rated their health related quality of life lower than subjects without hearing impairment (after adjustment for socio-demographic, psychological factors and co-morbidities) (Baek et al., 2016). A Croatian study also found that parents of preschool-aged speech-and hearing-impaired children experienced poorer health related quality of life than parents of healthy children of the same age. Mothers of hearing-impaired children were found to be especially affected, demonstrating a negative impact in almost all health domains (Aras et al., 2014).

The presence of developmental difficulties, including communication impairments, impacts an individual's need for, and ability to, access appropriate health services. Increased health costs have been reported for families of children with communication impairments (Cronin, Reeve, McCabe, Viney, & Goodall, 2017; Ha et al., 2017). For adults with acquired disabilities, the presence of a communication impairment may increase their healthcare costs, thereby increasing financial strain and placing them at risk of poverty. Post-stroke aphasia adds to the cost of stroke-related care in the US when compared to stroke care for those without aphasia (Ellis, Simpson, Bonilha, Mauldin, & Simpson, 2012).

Healthcare is highly dependent on good communication and those with communication disability are at a disadvantage when it comes to access and safety in healthcare encounters. For example, a study in Canada reported that adults with communication impairments had a three–fold increase in the risk of experiencing an adverse healthcare event (for example medication errors, delay in treatment) than those without communication impairments (Bartlett, Blais, Tamblyn, Clermont, & MacGibbon, 2008). People with severe aphasia are often marginalised in healthcare and are more likely to receive inadequate care (Parr, 2004). Negative health outcomes linked to difficulties communicating in healthcare contexts are also reported for those with communication disability (Hemsley, Werninck, & Worrall, 2013; Dinsmore, 2012).

The Marmot review (2010) in the United Kingdom brought to light the social gradient in health inequalities – simply put, the lower one's socioeconomic status, the poorer one's health is likely to be. Communication disability is one factor in a complex interaction of many factors including housing, income, education, and social isolation that contribute to the social gradient in health inequalities.

Education and communication disability

The presence of communication disability impacts educational attainment. Language is the medium of instruction, of participation and assessment of progress in schools. Without appropriate adjustments to support an inclusive communication environment, those with communication disability are at risk of educational failure. Learning to read is fundamentally a language task (Pentimonti, Murphy, Justice, Logan, & Kaderavek, 2016; Catts & Hogan, 2003). Consequently, children who enter school with language difficulties are at risk of reading difficulties (Snow, 1991). When the focus of education shifts from learning to read to reading to learn, the disadvantage facing those who experience difficulties in learning to read is compounded. Literacy skills are inescapably important for academic success across the school curriculum (Dockrell, Lindsay & Palikara, 2011).

An Australian study showed that 12 to 15 percent of 14,500 primary and secondary school students experienced a communication impairment (McLeod & McKinnon, 2007). Children identified with language disorders demonstrate poor academic achievement throughout school, and into higher education (Beitchman et al., 1996; Johnson et al., 2010). Children with congenital and early-identified unilateral hearing loss have been found to be at risk for delays in speech-language development. School-aged children with unilateral hearing loss score lower on standardised tests of language and cognition and require increased assistance in school for educational and behavioural issues when compared with siblings with normal hearing (Lieu, 2018).

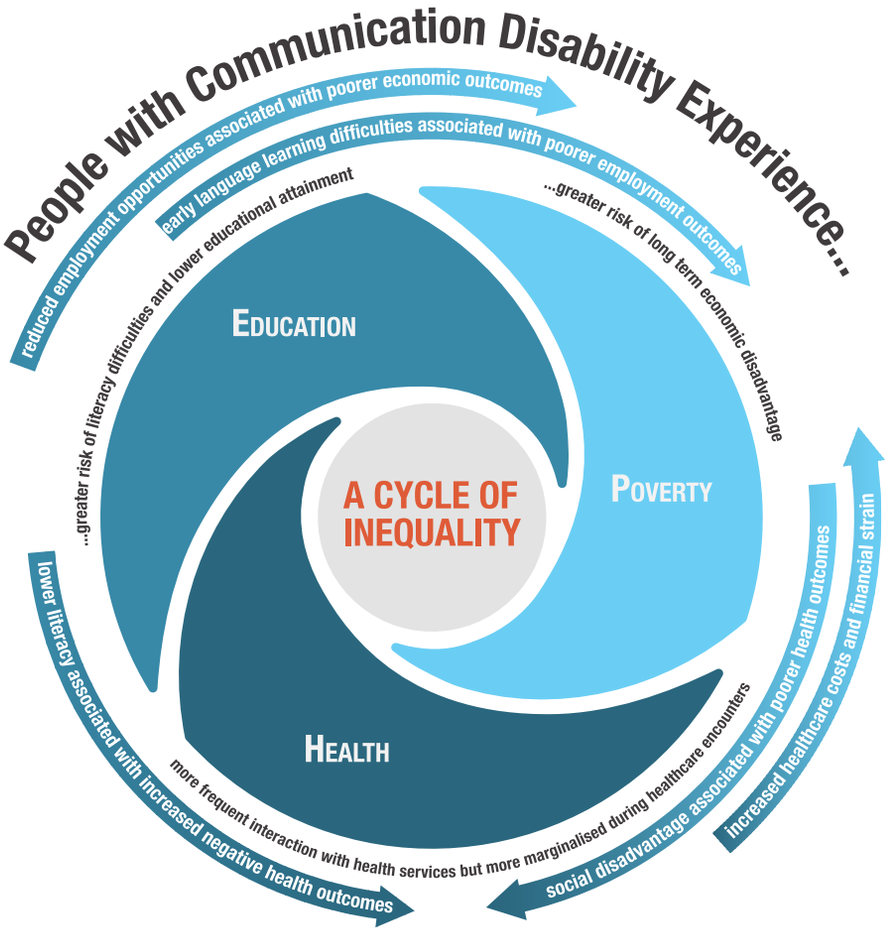
Poor educational outcomes have been found to persist into adulthood; Johnson et al. (2010) demonstrated poorer outcomes in educational attainment for young adults with a history of language impairments. Language difficulties have also been found to be correlated with teacher-rated behaviour problems (Norbury et al., 2016). Children with language impairments were rated twice as likely to show externalised, internalised and ADHD behaviour symptoms compared to children without language impairments (Yew et al., 2013).

Academic success promotes the likelihood that the young person will progress to further education or training post-school, and thus emerge with marketable employment skills. A disproportionate number of young people not in education, employment or training have communication disability (Lanz, 2009). Children with vocabulary difficulties at age five are more likely to have poor employment outcomes at age 34 (Law et al., 2009). Thus, research has shown that the presence of early language learning difficulties affects subsequent employment outcomes (Law, Rush, Shoon & Parsons, 2009).

Communication disability has an intergenerational impact with a family history of language difficulties, maternal education level, and socio-economic status being key contributors to child language outcomes at age four (Reilly et al., 2010).

A cycle of inequality

Poverty can contribute to the development of communication disability but the opposite is also true; communication disability places individuals and their families at greater risk of living in poverty, with children and adults with communication disability generally having poorer academic, vocational, social and health outcomes than those without communication disability.



The evidence is clear; communication disability creates significant barriers to the alleviation of poverty, and access to healthcare and education. The implications are significant and intergenerational. Although the majority of evidence is largely from developed economies, the presence and the effects of communication disability are significant, and therefore must be considered in developing countries. It is therefore desirable that provision is made to address communication disability as part of any and all efforts to implement these sustainable development goals.

For SDGs 1, 3 & 4 to be truly sustainable, to assist in poverty alleviation, to ensure an individual is able to access health care provision and to enable that individual to meaningfully engage with, and benefit from education, efforts to address communication disability should be considered as part of all activity to implement the sustainable development goals:

- SDG #1 target for “social protection systems” should include support for those with communication disability and systems that are accessible to those with communication disability.
- SDG #3 target for “universal health coverage” should include access to speech and language therapy and audiology services.
- SDG#4 target to “ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations” should include speech and language therapy services to enable children and adults with communication disability to access education.

Intervention for communication disabilities

Speech-language pathologists and audiologists have a crucial role in providing support to both children and adults with communication disability, including those living in poverty, to enable them to access employment, healthcare and education; through culturally and linguistically appropriate interventions.

Speech-language pathologist interventions include contributing to the design and delivery of early years and school services aimed at facilitating children's speech, language and communication development as well as providing direct services to adults and children with communication disability to improve speech, language and communication skills essential for everyday life. Speech-language pathologists may carry out interventions themselves or train others (such as assistants, parents or teachers) in a range of settings, such as the home, healthcare centres or schools. Interventions have been shown to be effective across different types of communication disability including, but not limited to, children with developmental speech and language impairment (Law, Garrett, & Nye, 2003), children with cerebral palsy (Pennington, Goldbart, & Marshall, 2004) and adults with aphasia following stroke (Brady, Kelly, Godwin, Enderby, & Campbell, 2016). Emerging evidence also suggests that preventive strategies which include speech and language therapy interventions have the potential to help socially disadvantaged populations (Law, Levickis, McKean, Goldfeld, Snow, & Reilly, 2017).

Audiologists often work in collaboration with speech-language pathologists to provide services to children and adults with hearing loss who are at risk of developing a communication disability. Audiologists identify, diagnose and manage hearing loss and other auditory disorders. Audiological interventions include prevention, counselling, treatment, (re)habilitation and education.

Provision of intervention is dependent on availability of a professional workforce. In the case of developing countries, this professional workforce must be made up of local people who are competent in the language and culture of the country. Wylie et al. (2013) reported a survey of speech-language pathologists working across four countries in sub-Saharan Africa. The ratio of speech-language pathologists in the African countries was 1 per 2 – 4 million people, compared to 1 per 2500 – 4700 people for the US, UK, Australia, and Canada. In South East Asian countries such as Vietnam (Atherton, Dung & Nhân, 2013), Cambodia (http://www.oiccambodia.org) and Malaysia (Ahmad, Ibrahim, Othman, & Vong, 2013) development of a speech-language pathologist workforce is in early stages, with small numbers of trained, local professionals available to work with large numbers of people with communication disability.

Recommendations

The International Communication Project recommends the following activities to support attainment of SDGs 1, 3 and 4:

- Seek collaboration between the World Health Organization and other relevant international agencies and the International Communication Project, which stands ready to participate in and assist with joint efforts that foster awareness and understanding of the scope of communication disability globally.
- Promote early intervention for communication disability to reduce negative outcomes such as poverty, poor health, and limited access to education.
- Support the development of speech and language therapy and audiology services and professions across countries where these services may not yet exist.
- Fund professional education in developing countries with a particular emphasis on developing culturally and linguistically appropriate care.
- Fund research to determine the global scope of communication disability.

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