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Sommario/riassunto	<p>Communication is vital for social participation. However, communication often takes place under suboptimal conditions. This makes communication harder and less reliable, leading at worst to social isolation. In order to promote participation, it is necessary to understand the mechanisms underlying communication in different situations. Human communication is often speech based, either oral or written, but may also involve gesture, either accompanying speech or in the form of sign language. For communication to be achieved, a signal generated by one person has to be perceived by another person, attended to, comprehended and responded to. This process may be hindered by adverse conditions including factors that may be internal to the sender (e.g. incomplete or idiosyncratic language production), occur during transmission (e.g. background noise or signal processing) or be internal to the receiver (e.g. poor grasp of the language or sensory impairment). The extent to which these factors interact to generate adverse conditions may differ across the lifespan. Recent work has shown that successful speech communication under adverse conditions is associated with good cognitive capacity including efficient working memory and executive abilities such as updating and inhibition. Further, frontoparietal networks associated with working memory and executive function have been shown to be activated to a greater degree when it is harder to achieve speech comprehension. To date, less work has focused on sign language communication under</p>

adverse conditions or the role of gestures accompanying speech communication under adverse conditions. It has been proposed that the role of working memory in communication under such conditions is to keep fragments of an incomplete signal in mind, updating them as appropriate and inhibiting irrelevant information, until an adequate match can be achieved with lexical and semantic representations held in long term memory. Recent models of working memory highlight an episodic buffer whose role is the multimodal integration of information from the senses and long term memory. It is likely that the episodic buffer plays a key role in communication under adverse conditions. The aim of this research topic is to draw together multiple perspectives on communication under adverse conditions including empirical and theoretical approaches. This will facilitate a scientific exchange among individual scientists and groups studying different aspects of communication under adverse conditions and/or the role of cognition in communication. As such, this topic belongs firmly within the field of Cognitive Hearing Science. Exchange of ideas among scientists with different perspectives on these issues will allow researchers to identify and highlight the way in which different internal and external factors interact to make communication in different modalities more or less successful across the lifespan. Such exchange is the forerunner of broader dissemination of results which ultimately, may make it possible to take measures to reduce adverse conditions, thus facilitating communication. Such measures might be implemented in relation to the built environment, the design of hearing aids and public awareness.
