

The impact of visual impairment on the acquisition of early communication skills

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Article A in the series Facilitating communication in people who have visual impairment and additional needs. All the articles are available to download from my website at

<http://ianpbell.wordpress.com/communication-in-vi-children/>

A list of all the articles in the series is provided on the website.

I have based this article on material used in short courses focussing on communication in children who have visual impairment and additional needs. I do not refer to original sources in this article, as I did not do so in my course material.

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Introduction

When a baby is born with visual impairment the effects are many and often very significant. Of course, it is not only the baby who is affected; there may be a huge impact on the parents and, indeed, on the whole family. Just how significant the effects are depends on many factors, including whether the baby has any vision, and, if so, how much. This article examines the impact of being born with visual impairment on the acquisition of early communication skills. These are the very important skills that emerge in typically developing babies during the first few months of life. They are essential for understanding and producing spoken language.

It is important to note that having visual impairment does not inevitably lead to significant difficulties with acquiring communication, and some babies who have visual impairment later become very effective communicators.

Because communication is connected with so many other skills and aspects of life, this article has many sections. Some deal with other aspects of development that are closely linked with communication. Other sections examine aspects of early communication that are affected in babies who have visual impairment.

It is, of course, important to carry out research into the development of babies and children who have visual impairment. This enables practitioners to have a better understanding of the impact of visual impairment on development. In turn, this means that it is possible to provide more effective support in the form of education and other services. Unfortunately, it is very difficult to carry out research into the development of babies and children who have visual impairment. Many factors are involved here. In due course, I hope to deal with this topic in a separate article. For now, it is sufficient to state that it is important to be cautious when considering the findings of research into the development of babies and children who have visual impairment.

Hospitalisation

Many new-born babies who have visual impairment have a prolonged spell in hospital. This period may be extended if the baby is born very prematurely, as is the case, for example, with those who have retinopathy of prematurity. Prolonged separation after birth can be

important as there is a risk that it will interfere with attachment (the establishment in the baby of an emotional bond with the parents; see also the section on Emotional development, p.10). Attachment typically develops in the first few days and weeks of life.

Separation from the parents that results from being in hospital is not unique to babies who have visual impairment, of course. But this early separation may be particularly significant for these babies: they depend very much on touch for their early learning, and this is severely reduced for many babies who spend time in hospital.

Parental reactions to the diagnosis

Learning that the baby has visual impairment can have a profound affect on the parents. There are many potential emotional reactions, several of which may be present together: they include shock, sadness, grief, anxiety, and depression. These natural responses may also interfere with the establishment of the close relationship between the baby and parents that typically develops in the first few days and weeks of life.

Attending appointments and having contact with practitioners

Many caregivers of a baby who has visual impairment are given numerous appointments to attend hospitals or clinics. It is also common for various practitioners to make home visits. Although appointments and support are provided from the best of motives, frequent contact with practitioners may reduce the confidence caregivers have in their child-rearing skills; indeed, it may have a negative impact on the child-rearing skills themselves. This is especially so if the support is fragmented and advice differs from one practitioner to another. If there is no other impact, all this support reduces the time and energy available for the caregivers to spend at home with the baby. This may interfere with the acquisition of early communication skills.

Auditory (hearing and listening) skills

Hearing and listening are mentioned here as they are clearly linked with the development of spoken language. Unfortunately, there has been little research into the development of auditory skills in babies who have visual impairment. A commonly held view is that people with poor sight

have good hearing. This view is based on what is known as sensory compensation. But sensory compensation is a myth: there is no reason for babies who have visual impairment to possess naturally better hearing and listening skills than their fully sighted counterparts.

Some babies who have visual impairment may go on to develop enhanced listening skills later in life. But this will only happen if the skills are systematically taught, or if the child is very motivated by some aspect of sound. Hearing acuity itself cannot be enhanced.

Orientation to sound may be delayed in babies who have visual impairment, but there is some disagreement about this. Reaching for objects by sound is delayed, but there is a general delay in reaching for objects, so the significance of this is not clear.

Some babies who have visual impairment withdraw from some sounds as though they are fearful. This may arise because, with little or no sight, the baby cannot readily identify the sounds and has no control over them. In fact, it is not surprising that a baby who has visual impairment is afraid of sounds like those of the vacuum cleaner and the washing machine.

Using the mouth to explore

The mouth is very important to babies for exploring items and learning about the world. Gradually, vision and hearing take over as the main ways to learn about the world. Babies who have visual impairment may continue to use the mouth as the main way to perceive the world until well into their second year. However, it is difficult to be sure of this as there is also a claim that babies who have visual impairment explore objects less with their lips and tongues than sighted babies. This may illustrate the wide differences between babies who have visual impairment.

Touch

An important distinction has been made between *active* and *passive* touch. Active touch is the process of manipulating an object in order to identify and learn about it. Passive touch is being touched by another person or being in contact with an object, without manipulating it.

There has been little research in this area. However, there is some evidence of a delay in early perception through active touch in babies who have visual impairment.

For babies with very little or no sight, touch is likely to be a very important way of learning about the world. A delay in the use of touch may have an impact on communication. This is because the acquisition of communication skills is closely linked with learning about the world.

Physical skills

Although babies who have visual impairment are not delayed in postural control, they are generally slower to crawl and walk than sighted babies. A factor here is likely to be the lack of incentives: babies who cannot see that there are interesting things to explore are not likely to be motivated to move about.

Fine motor skills are affected in babies who have visual impairment. This is not surprising, as many of these skills rely heavily on vision in typically developing babies. In babies who have visual impairment delays have been observed in holding objects with one hand, grasping objects, pincer grasping, scrawling and fitting pieces in holes.

Drive

Typically developing babies seem to have a strong drive to be active and to explore the world. In contrast, many babies who have visual impairment are passive; these babies

- are less inclined to search for new experiences
- may learn to be helpless
- do not demand much of caregivers
- are content to lie in their cots seemingly uninterested in social and environmental stimuli.

But this learned helplessness is not necessarily directly due to the lack of vision; rather, as noted above, the lack of vision means the baby is not attracted by items in the environment which a sighted baby would find interesting.

Another factor is that caregivers may not interact with the baby who has visual impairment in the most supportive ways. This is explored in a little more detail in the section on Caregiver responsiveness (p.19).

A vicious circle may result:

- the baby's inclination to be passive means he or she is rather inactive
- this means caregivers have less to respond to
- caregivers may adopt a child-rearing style that is not supportive
- positive social interactions are reduced
- therefore, the child becomes socially isolated.

A lack of drive can have a very serious affect on the acquisition of communication. A crucial skill necessary for being an effective communicator is taking the lead. Typically developing babies become effective communicators because caregivers respond to them and follow their lead. A baby who has visual impairment who is very passive may fail to learn that he or she can influence what other people do. Thus the baby is less likely to learn how to make requests and may even fail to reject items he or she does not want.

Cognitive skills

Cognitive skills (those related to understanding the world) matter here because they are closely linked with the acquisition of communication. A delay in understanding the world may hold back the development of communication.

In the first 3 to 4 months, babies who have visual impairment are similar to sighted babies. But sighted babies typically begin to reach for objects at this age. Babies who have visual impairment take longer to do this, and then lag behind. This delay continues for some years. As long as the child's communication skills progress reasonably well this may not be a problem in the long term. This is because later on language appears to have a compensatory function; it enables children who have visual impairment to learn about the world indirectly and they no longer show a delay in their reasoning abilities. The early difficulties are probably due to their restricted exploration of the environment.

An important cognitive skill as far as communication is concerned is object permanence. This is understanding that an object or other person still exists when it is not immediately accessible. Sighted babies acquire object permanence largely through vision. Initially, when they see objects disappear, they lose interest, treating those objects as if they no longer exist. But sometimes an object or person that has disappeared re-appears almost immediately, and the baby begins to understand that it is, indeed, the same object or person. It is possible to tell that a baby has acquired object permanence when he or she looks for an object that has disappeared; for example, the baby may remove a cushion to find a favourite toy that has been hidden.

In the very early stages of learning to speak, children only refer to things that are accessible, that is things they can see, touch, smell or hear. Unless they have object permanence, they will never learn to talk about things that are inaccessible, that is things they cannot see, touch, smell or hear.

Unfortunately, research results are difficult to interpret. However, there is evidence that some babies who have visual impairment are late to acquire object permanence. Those who have some vision have an advantage.

The ability to understand cause and effect is another cognitive skill that is important for communication. Although there is no research evidence, it seems possible that a lack of visual experience can cause a delay in understanding cause and effect. In addition, being passive (see the previous section on Drive, p.6), will make it harder to learn that doing something may result in another person responding – in other words, that doing something may cause an effect.

To become an effective communicator, babies need the cognitive skill of understanding symbols. A symbol is simply something that stands for something else. Words are symbols. But babies who have visual impairment do not understand symbols in the way that sighted babies do. In particular, babies who have visual impairment do not realise that miniatures stand for (that is, are symbols for) the real items. For example, a sighted baby can see a definite similarity between a teddy bear and a human: it has eyes, nose, arms, legs, etc. But a baby who has very little or no vision is unlikely to notice any similarities: a teddy bear does not feel like a real person, either to the hands or to the mouth; it does not make the sounds a real person makes; it does not smell like a real person; it does not do any of the things that a real person does.

Sighted babies almost constantly have symbols around them in the form of pictures, but, of course, these are either totally inaccessible to the babies who have visual impairment, or very difficult to access.

Memory is another cognitive skill linked with communication. There is evidence that there is nothing wrong with memory in babies who have visual impairment. Indeed, in older children who have visual impairment, memory may be better than in sighted children. In particular, some children who have visual impairment seem to have a good memory for words, and speech sounds; some develop an excellent memory for music.

So, to sum up, several important cognitive skills closely linked with communication may be delayed in babies who have visual impairment.

Play

The evidence on play in babies and children who have visual impairment is confused and confusing. Many subjective reports indicate that the play of babies and children who have visual impairment is adversely affected by their lack of vision. However, not all objective research supports this.

It seems that, compared with sighted babies and children, some babies and children who have visual impairment

- play less
- are more inward and isolated in their play
- play in a less creative and imaginative manner
- spend more time in repetitive, manipulative or explorative activities
- involve their own bodies in their play, rather than objects or other people
- are more dependent on adults in their play.

Symbolic play can be delayed by limited experience which can stem from

- the restricted mobility caused by the visual impairment
- a lack of motivation, resulting from not being aware that there are interesting items which could be played with (see the section on Drive, p.6)

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- lack of opportunity for imitation (see the section on Imitation, p.15)
- delays in understanding symbols (see the section above on Cognitive skills, p.7)
- being over-protected by caregivers who are fearful that the baby may come to harm if allowed to explore.

Play may remain concrete and manipulative in some babies and children who have visual impairment. Pretend play does not seem to appear until towards the end of the second year, and symbolic play may be delayed until 3 years of age.

Emotional development

Emotional development (understanding and interacting effectively with other people) is important for communication.

Attachment is the development in the baby of an emotional bond with another human being. Typically, the first and probably most significant attachment is to the mother. With little or no sight, babies who have visual impairment are at risk, and attachment may be delayed. A baby who has visual impairment who spends a long period in hospital is particularly at risk (see the section on Hospitalisation, p.3). The risks can be reduced by the parents if they encourage and respond to the baby's interactive behaviours as soon as that is possible.

Another skill that is important for emotional development is that of differentiating the self from the world. Not surprisingly, with little or no vision, this is delayed in some babies who have visual impairment.

An important emotional skill linked with communication is that of recognising other people's feelings. However, this may be more difficult for babies and children who have visual impairment: with little or no sight, it is very hard, or impossible, to see other people's facial expressions. But, of course, facial expression is an important indicator of how another person is feeling.

Eye contact with people and objects

One of the most important features of communication is that it enables us to have some control over other people. In fact, vision provides sighted babies with some "control" almost from birth: the baby can look towards a caregiver and can then look away; thus the child can "turn on" and "turn off" the caregiver. From the very beginning, then, caregivers are able to respond to the baby: when the baby looks towards the caregiver, the caregiver responds by alerting, showing interest and by cooing or speaking; when the baby looks away again, the caregiver responds by pausing, waiting for the baby to look again.

A new-born baby who has little or no vision is unlikely to behave in the same way as a sighted baby; thus the caregivers are deprived of the signals which indicate how they should respond. It would be surprising if the typical pattern of baby / caregiver interaction were not affected.

If the baby who has visual impairment rarely or never looks towards people, and later fails to make eye contact, the caregivers may come to believe that the baby has no interest in them. This can be very difficult for the caregivers, especially for the parents; they may feel that the baby does not love them; they may also feel inadequate, and wonder what it is they are doing wrong.

Caregivers typically respond when a baby looks towards them. Although a baby who has visual impairment is unlikely to do this, he or she may show interest in caregivers in some other way; for example, the baby may become very still, or may turn very slightly towards the caregiver. However, such subtle behaviours are very difficult to detect, and may go un-noticed by the caregiver. If this happens, it may well strengthen any tendency on the part of the baby to be passive.

As noted in the section on Drive (p.6), the lack of vision makes it difficult for the baby to take an interest in objects in the environment. This also makes it difficult for caregivers to respond to the baby. This is because caregivers respond when the baby shows an interest in something; with sighted babies, this is by following the baby's line of gaze: caregivers assume if the baby is looking at an object, that he or she is interested in it. (See further the sections on Joint attention, p.16, and Intentional communication, p.17.)

Eye contact with other people and with objects, then, both play a very important role in the development of communication in sighted babies.

With little or no sight, the baby who has visual impairment is at risk. As well as the features discussed in this section, joint attention and intentional communication are likely to be harder for babies who have visual impairment.

Facial expressions

In the section on Emotional development (p.10) there was mention of the fact that, with little or no sight, it is very hard, or impossible, for babies who have visual impairment to see other people's facial expressions.

Effective communicators, of course, also use facial expressions themselves. Some researchers have reported that babies who have visual impairment lack facial expressions; however, others have reported that they have the full range of facial expressions. It seems likely that the ability to use facial expressions varies from baby to baby, though it does seem unlikely that babies who have visual impairment use the full range of facial expressions available to sighted babies.

It has been reported that babies who have visual impairment adopt a passive expression when spoken to, and this can give the impression that they are uninterested. This could result in caregivers finding it difficult to speak to the baby, and could reduce such behaviour.

Smiling

This facial expression is discussed in a section of its own as it is so important in the early stages of a child's life. Smiling develops differently in babies who have visual impairment compared with their sighted peers: babies who have visual impairment

- smile less often
- produce smiles which seem muted
- do not automatically smile in response to the caregiver's face
- smile more frequently after 2 months, but the mother's voice does not regularly elicit it, as is the case with sighted babies
- do not initiate contact by smiling
- tend not to smile unless the mother coaxes it; vigorously touching or moving the baby seems best.

Little or no smiling on the part of the baby who has visual impairment may indicate to the caregivers that the baby is unfriendly, even unloving, and unresponsive. Caregivers, perhaps parents in particular, may feel inadequate, if they think the baby is failing to smile through some fault of theirs.

Communicative movement and early gesture

Quite early on, the sighted baby makes movements of anticipation as a caregiver approaches. These movements signal to the caregiver that the baby is excited at the prospect of receiving contact. However, the baby who has visual impairment may well fail to make such movements. By about the age of 5 months, the typical baby is extending his / her arms to be picked up. In babies who have visual impairment, this is delayed, and more typically occurs at about 12 months. The absence of excited movements as a caregiver approaches and the delay in asking to be picked up can again result in caregivers gaining the impression that the baby is not interested, or even unloving.

In fact, some babies who have visual impairment startle when they are picked up. This is because, with very little or no vision, they are unaware that someone is approaching and preparing to pick them up. This is most likely to happen when the caregiver fails to speak as he / she approaches. Startling in this way may be another reason for caregivers to believe the baby dislikes contact.

Movement is an important way for some babies who have visual impairment to signal meaning. The following have been observed:

- using the hands very expressively
- initiating contact and attracting attention partly through body movements
- using gestures to participate in, or request routines
- using a rejection gesture, in which the baby turns the face away from an object, at the same time pushing it aside
- signalling displeasure by turning the face.

These behaviours may be quite subtle, and caregivers may well fail to understand their potential importance. If this is the case, they are unlikely to respond positively to the baby, who may, therefore, become frustrated and become less inclined to seek contact and to attempt to interact.

Many totally blind babies do not use conventional, communicative gestures such as pointing, showing, nodding, and waving. The lack of these behaviours further exacerbates the difficulties caregivers may have interacting with a baby who has visual impairment.

Vocalising and babbling

Babies who have visual impairment begin to babble at between 6 and 7 months, at the same age as sighted babies. However, babies who have visual impairment seem to vocalise less than sighted babies: they

- rarely vocalise to greet
- rarely initiate dialogues by vocalising
- vocalise less while the caregiver is interacting with them
- are noticeably silent when the caregiver stops interacting.

It is possible that babies who have visual impairment are quieter than sighted babies because listening is so important to them. With little or no sight, babies who have visual impairment rely a great deal on listening to monitor the world and to receive stimulation. However, if they vocalise themselves, it is harder for them listen to what is going on around them.

Reciprocity

A fundamental feature of communication is reciprocity: taking turns with another person and so jointly participating in an interaction which changes as each person responds to what the other offers. Reciprocal behaviour may have its origins in the burst-pause pattern of sucking typically established by the newborn baby. However, vision would seem to play an important part in this process for sighted babies, so it may be more difficult for a baby who has visual impairment to establish the burst-pause pattern of sucking. This may be particularly true for those who have a prolonged period in hospital early in life.

In the first few months, so much interaction between a sighted baby and the caregivers depends on vision: as noted in the section on Eye contact with people and objects (p.11), a sighted baby can very effectively “turn on” and “turn off” caregivers by looking towards them and then looking away. But a baby who has very little or no sight lacks this ability.

Furthermore, it may be more difficult for a baby who has visual impairment to recognise reciprocity when it occurs in the course of interaction. Because so many early interactive (that is reciprocal) routines typically rely on vision, babies who have visual impairment have fewer opportunities than their sighted counterparts to practise reciprocal acts. Give-and-take games feature quite prominently in the lives of many sighted babies around the end of the first year: for example, they frequently offer, give and then receive back an item; they roll a ball to-and-fro with a partner.

Without vision, anticipatory games may contain too much surprise for the baby. In addition, such games may deny the baby who has visual impairment sufficient opportunities to control events. The baby, therefore, may be reluctant to participate.

There are various cues the babies who have very little or no sight can use to engage in reciprocal interaction based on sound, touch and vestibular stimulation, provided the adult is attuned.

It is possible for babies who have visual impairment and their caregivers to become well tuned-into each other, but this may depend on the caregivers being naturally very responsive and observant or on receiving very effective support.

Imitation

Imitation is considered to be important in communicative development, presumably playing a part, for example, in babies learning to produce the speech sounds of their native language. But sighted babies and young children also participate in many imitative games with caregivers which involve vision. This means that babies who have visual impairment have fewer opportunities to imitate than sighted babies.

Imitation is one way to establish turn-taking, reciprocal interactions which are like later communication. Therefore, having fewer opportunities to imitate, may be another barrier to babies who have visual impairment becoming effective communicators.

Furthermore, imitative games enable the sighted baby and caregiver to develop mutual understandings, another essential for successful communication.

Initiating

Babies who have visual impairment have few behaviours with which they can initiate social exchange. They do not

- initiate contact by smiling
- initiate affectionate games
- produce many spontaneous vocalisations or
- indicate with gestures the desire to be held.

A baby who has visual impairment may depend on physical contact to initiate interaction. As the baby will not be independently mobile, the baby is only able to initiate when a caregiver has made him- or herself available.

There is some evidence that mothers respond less to the initiations of babies who have visual impairment than to those of their sighted babies. A difficulty here is that mothers look less at their babies who have visual impairment than at their sighted babies. Thus, they may miss some of the cues that their babies who have visual impairment do send.

This may be very significant, as the baby's cues are likely to consist of movements; see the section on Communicative movement and early gesture (p.13).

Joint attention

Being able to pay attention to the same thing as another person is essential for effective communication. This ability typically develops before the baby is 12 months old and is closely linked with the development of intentional communication, which is discussed in the next section (p.17).

In order to attend jointly, the baby must be able to

- shift attention from an object to a person and back again
- understand whether the other person is focussing on the item of interest.

Before the sighted baby has learned to establish joint attention and communicate with intention, caregivers are able to attend to what the baby is interested in by following the baby's gaze. They can then bring

the object of interest to the baby, or take the baby to the object.

By about 9 months of age, sighted babies can follow an adult's gaze: they can attend to the same thing as the caregiver. They then learn how to establish joint attention with another person. With very little or no vision, learning how to establish joint attention with another person on an item of interest may be difficult for babies who have visual impairment. All three steps present major barriers to babies who have visual impairment: they

- may be unaware of the presence of things to be interested in
- may be unaware that there is another person present whose attention could be drawn to any item of interest
- are unable to draw another person's attention to an item of interest by transferring their gaze from the person to the item, which is how sighted babies achieve this.

Babies who have visual impairment may not find it as difficult to pay joint attention to an item when it is the caregiver who initiates this. However, when another person initiates joint attention, it is likely that the baby will only jointly attend to an item that is of very real interest.

It must also be pointed out that responding to another person's attempt to establish joint attention is very different from taking the initiative and establishing joint attention yourself.

It is likely that difficulties with joint attention result in it being more difficult for babies who have visual impairment to learn the words for objects, people, events and activities. Sighted babies begin to learn what some frequently-used words mean because they repeatedly hear each word as they see the appropriate object, person, event or activity.

However, the difficulties with learning what words mean may not be as significant as the difficulties with establishing joint attention. Joint attention is a crucial communication skill; being without it leads to the social communication difficulties typical of children with autism.

Intentional communication

It is not always easy to determine whether a baby can communicate intentionally. Perhaps the most obvious context for observing intentional communication is that of requesting. The ability to request an item is

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closely related to that of establishing joint attention, discussed in the previous section.

The following behaviours indicate intentionality in a baby:

- alternating eye gaze between an item that is wanted and another person
- moving close to another person before trying to get a response from him or her
- indicating desire by vocalising
- waiting for a response from the other person
- being persistent: continuing to indicate desire until the wanted item is obtained or failure is indicated
- trying one behaviour and then another if the first fails
- ceasing to indicate desire when the wanted item is obtained
- displaying satisfaction when the wanted item is obtained, or dissatisfaction when it is not.

The baby who has visual impairment is therefore at a disadvantage, as is the baby who is not mobile.

With very little or no vision, communicating intentionally may be difficult for babies who have visual impairment. The barriers for them are similar to those which make it difficult for them to establish joint attention: babies who have visual impairment

- being unaware of the presence of things to be interested in, may lack the desire for anything, and therefore have no need to make a request
- may be unaware that there is another person present to whom they could address their request
- are unable to draw another person's attention to an item they desire by alternating eye gaze between the item and the person.

Mis-match between the development of communication and other skills

Typical babies learn to make requests before they are independently mobile. In some babies who have visual impairment, this is reversed:

they become independently mobile before they learn how to request; thus they are able to obtain objects independently, and therefore have less need to communicate than typically developing children. This may be serious, contributing to significant social communication difficulties later on.

Caregiver responsiveness

Newborn babies who are sighted have complex behaviours for interacting with and eliciting nurturing responses from caregivers. We now know that typical babies develop as they do because caregivers respond to their behaviour. Babies seemed to be programmed to behave in certain ways and adults, when caring for babies, seem to be programmed to respond appropriately.

However, babies who have visual impairment do not behave as expected, making it more difficult for caregivers to provide appropriate responses. For example, babies who have visual impairment may

- not look towards caregivers
- not return gaze (or not do so readily)
- adopt a passive expression when spoken to
- not smile in the way sighted babies do
- startle on being picked up
- not vocalise as sighted babies do
- not show as much interest in the world as sighted babies
- have difficulty sharing attention.

There is evidence that caregivers adopt a different pattern of child-rearing when confronted with the task of bringing up a baby who has visual impairment.

For example, babies who have visual impairment experience a greater 'ignoring rate'. This may mean the baby feels unable to control the environment. In turn, this may lead to withdrawing from the environment and, possibly, the development of self-stimulatory behaviours.

But even if a caregiver watches the baby who has visual impairment a great deal, the baby will not be aware of this, unless the caregiver also demonstrates to the baby in a non-visual way that he / she is attending.

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Sighted babies explore more when they are aware of being observed by a caregiver. Babies who have visual impairment may explore less and feel less secure because they do not know that they are being observed.

Caregivers of babies who have visual impairment

- look at their babies less, so they may miss some of the cues the baby gives
- vocalise less in a positive manner
- give fewer positive responses when the baby initiates (except when the baby smiles).

Although the baby who has visual impairment may behave in ways which could signal attention and interest, the baby's movements may be very slight (e.g. when attending to a sound) and difficult for caregivers to notice. If a baby's face and body are immobile, caregivers are likely to think the baby is not interested. However, such immobility in a baby who has visual impairment may be due to the baby concentrating.

Caregivers of a baby who has visual impairment are deprived of many of the rewards obtained from a sighted baby. As already noted, babies who have visual impairment

- are unlikely to look towards people, and very unlikely to make eye contact
- smile differently from sighted babies
- may startle on being picked up
- do not excitedly anticipate being picked
- vocalise and babble less than sighted babies
- tend to be passive and do not explore the world as sighted babies do, giving the impression they are not interested.

Thus, caregivers of a baby who has visual impairment may have reduced opportunities to join in with the baby's activities and maintain and develop them. As a result of this, caregivers may initiate interaction with the baby less frequently. The baby is then likely to lack experience of social interaction, causing difficulties in learning to become a communicator.

On the other hand, caregivers may try to coax the baby to make eye contact, smile and vocalise and may try to stimulate the baby by bringing

things to feel, hear and touch. However, excessive coaxing, persuading and stimulation reduce opportunities to initiate, so there is a risk that the baby will become even more passive. A baby who rarely takes the initiative is unlikely to become an effective communicator.

So, many babies who have visual impairment are doubly disadvantaged in learning to communicate:

- the lack of vision itself presents some significant difficulties
- caregivers, by modifying the ways in which they behave with the baby, may actually increase those difficulties.

Babies and children who have visual impairment and additional needs

It is important to note that a large proportion of children who have visual impairment also have additional needs. These include

- learning disabilities
- hearing impairment
- physical disabilities
- autism
- epilepsy and other medical needs.

The precise nature and severity of the additional needs varies widely. Many children, in addition to visual impairment, have not just one, but a combination of additional needs. The presence of one additional need compounds the impact of the visual impairment on the acquisition of communication. Several areas of additional need clearly have an even greater impact. A common effect is the extension of the period during which communication skills develop. Indeed, many children who have visual impairment and additional needs do not progress beyond the very early stages of communicative development. It is for this reason that “baby” has been replaced with “child” in this section.

Of concern here is that many children who have visual impairment and additional needs face particular difficulties as far as adult responsiveness is concerned. These difficulties arise from the idiosyncratic ways in which many of these children behave.

These unconventional behaviours include tongue thrusts, eye blinks and shifts in position. Some of these behaviours may be communicative. If they are not currently communicative, responding to them as if they are may mean they become communicative. Unfortunately, caregivers and practitioners respond less to unconventional behaviours than to conventional ones such as vocalisations.

A combination of visual impairment and additional needs can make it very difficult to interact with the child. For example, some children

- do very little, offering caregivers and practitioners few opportunities to respond
- produce few behaviours, interspersed with long pauses, so it is difficult for caregivers and practitioners to get a feel for the rhythm
- behave with no rhythm – a behaviour may seem to be continuous, lasting for a considerable time with no pauses
- (e.g. those with cerebral palsy) produce movements which are jerky and uncoordinated, and therefore difficult to interpret
- (e.g. those with autism) behave in ways which can be very confusing for caregivers and practitioners, who may easily respond inappropriately from the best of motives
- (e.g. both those with cerebral palsy and those with autism) may take much longer to respond to a stimulus, sometimes making it difficult for caregivers and practitioners to know whether the child is responding, and, if so, to what.

Summary

Vision plays a predominant part in typical social interaction, and in the acquisition of communication skills. Babies who have visual impairment are at risk of taking longer to become effective communicators and some experience long-term difficulties with communication.

However, having visual impairment does not inevitably lead to significant difficulties with acquiring communication, and some babies who have visual impairment become very effective communicators. Outcomes vary widely, and the reasons are not properly understood.

The impact of visual impairment on the acquisition of early communication skills

Factors which affect outcomes seem to include:

- the baby's cognitive and learning abilities
- the extent to which caregivers are able to support the baby by compensating for the lack of vision with alternative ways to engage in early social interaction and communication
- the severity of the visual impairment: even minimal vision, or a short period of vision early on, seem to be important positive factors.