

The Cognitive, Psychological and Cultural Impact of Communication Barrier on Deaf Adults' Content of Speech in Iran

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Abstract

It is an oversimplification to consider signing simply as a substitution for oral communication in the manner that, for example, French may be considered as a substitute for English. The use of signing is a significant cognitive, psychological and cultural determinant in the development of the user. A deaf person communicating with a hearing person is not only dealing with a physical but also, a cultural barrier.

This article examines the problems resulting from deaf people's inability to communicate effectively across these barriers. It reports on a study of 32 participants, aged 18-55, from all 31 provinces of Iran. The participants had hearing losses ranging from mild to profound. Some participants had hearing parents others, deaf. The result of the study indicates that there are several barriers that affect the flow of *communication* and that these barriers create severe problems in the areas of education, emotions, and culture. The study suggests the families, educators, and all people related to the deaf; that signing is of significant importance to breaking the barriers leading to deaf people's development in cognitive, affective, social, and cultural functioning.

Keywords: Communication barrier; Deaf person; Speech; Semantics

Introduction

The quality of parents' communication and their attitude towards deafness may be considered as the most important factor in the social development of deaf children [1]. These issues interact. Parents who are more accepting and positive toward their children's deafness are more flexible and seek effective paths of communication. Language is essential to brain functions such as abstract thinking, memory, and self-awareness. Hiskey believes that language manages the hardware of the brain. That is why, despite a healthy brain, deaf people who were identified late or were not taught to use sign language are mentally disabled until they learn a language.

Deaf children experience more illnesses compared to hearing children because central nervous system disorders have a significant impact on developing a mental health problem by six times. The psychological conditions including a communication barrier, low self-esteem, and lack of strong attachment are also considered to have a strong effect on mental health. Those deaf children of deaf parents, who are able to communicate and have developed a sound relationship with their parents, do not have any serious mental problems [2].

Considering the researches, communication has been studied from two different aspects: content (the topic) and process (the mechanism of the communication). A study of the literature shows that almost all the research on the deaf people's communication involved the process, e.g. the phonological aspects of speech such as articulation, pitch, intonation, intensity, prosody, etc. [3] or the physical characteristics strategies required for clear communication with a deaf person including background noise, background colour, light, way of lip reading, maintaining eye contact and so on [4].

Although the techniques, skills, and strategies of communication improve interaction, solve the problems, create a comforting and friendly relationship etc., we first need to examine the content of communication to determine the basis of the deaf people's problems.

Speech and speech reading is not an appropriate means of communication for many deaf individuals because they can understand only about one third of spoken words by lip-reading. The best lip-readers comprehend only about 25% of what is spoken under ideal lighting and positioning conditions as lip-reading is not just a visual skill, it depends also on inspired guessing and the use of contextual clues [5]. The outcome is a lack of bilateral comprehension. More than half the deaf children in Canada and United States speak unintelligibly [6]. Speech reading technique is not only ineffective, but reduces the development of other communication strategies including sign language [7]. However, there is evidence that sign language supports the learning of oral language, even for those deaf children with cochlear implants [1]. The critical point is the author's state that a delay in learning a language is not natural, and thus the early acquisition of any language assists the normal development of both deaf and hearing individuals. The available evidence also confirms that regardless of the language, whether spoken or sign language, if hearing parents do not have a common language with their deaf children to start an effective communication at an early age, their children suffer socially and academically; thus the quality of their interactions are not as rich as those children who share the same language [8].

In oral communication there is a distinction between hearing a physical process and listening to a cognitive process. Although a deaf person may perceive the exact words spoken, it does not mean the deaf person understands the speech. Deaf children do not benefit from spoken language in the manner that hearing children do. The resulting reduction in content over time lessens mental development. Besides, the hearing individuals may generally lower their level of speaking and

expectation which, in turn, worsen the already problematic language development [9].

The present study aims to investigate the content of the deaf people's communication whether it differs when they sign or speech, with hearing or deaf people. Do they, for instance, speak of various topics and in a different manner when their interlocutor is using Iranian sign language (ISL) rather than oral communication? It is intended to determine the influence of sign language, as the deaf people's first language, on the richness or content of the communication, which in itself leads to the deaf people's cognitive and social development. The result is of value for the deaf people's educators and families to use, and encourage others to use, sign language to break the communication barriers and learn about the deaf individuals' culture; this opportunity contributes to the deaf people's mental and emotional enhancement.

Effective Communication and its Impact

The extent of personal communication has great effect on different aspects of life including cognitive, emotional, educational, language development, literacy, and general academic ability [1]. This is because according to Brown [10], among others, language extends beyond cognition and memory manifesting affective ability, social or pragmatic function. To develop normally and discover the world, we necessarily need language. However, deaf children usually are not completely exposed to communication until after they have passed the critical period [1]. That is why deaf children of deaf parents have fewer problems in development and learning. The early deaf signers are also emotionally better adapted on the whole, have socially better relationship with their signing peers and parents, and academically do better, compared with deaf oral children of similar hearing loss. Deaf parents use different visual and tactile strategies in order to have effective communication with their children, but the hearing parents do not know about the strategies and cannot produce them naturally [11-13]. Therefore, deafness and inability to speak per se does not lead to a delay in development. In fact, the main cause of the delay is that parents and children cannot communicate effectively [14-16].

Positively social students enjoy higher academic achievement, more successful jobs, and psychological health [17]. Therefore, "the important fact is not the ability to speak, but the ability to communicate through language, whatever its form, from an early age" [1].

By the 1980s research revealed the significance of mothers' and caregivers' interaction with hearing children on the children's language development [1]. To understand the reasons for the delayed language acquisition in deaf children, the studies compared hearing mothers' communications with their deaf and hearing children; the result indicated that the mothers' interaction was significantly different and this difference caused the language delays.

Unlike hearing children who have language input from a wide variety of sources including TV, radio, lectures, newspapers, people's conversation etc. deaf children rely heavily on their parents and siblings for language input. They only learn what is individually and purposely communicated or taught to them [9]. The appropriate age to prevent the delays in the normal development of language is considered six months, regardless of other factors including sex, social

class, additional handicap, degrees of hearing loss, and means of communication in the family (oral or signing) [18]. Of course the research showed that the delay cannot be totally eliminated. Marschark believes language acquisition starts at birth because of communication with parents and siblings besides exposure to language; although it actually happens when the child is six months old, the hearing children learn about language use including facial expressions, intonations, and turn taking during this time [1].

The main problem deaf people face is not that they are unable to speak, but that they have difficulty in the areas of lexicon, syntax, and semantics, which is because of late language development; the brain has plasticity to change at youth [19].

In order to determine in details the content of deaf individuals' communication and its impact on their cognitive and psychological development, the deaf people have been observed and interviewed while talking to hearing people, deaf people, and the hearing who know ISL. The content of their communication was analyzed from different aspects including the topics. The outcome is envisaged to reveal the effect of using sign language on breaking the communication barriers and all the cultural and social aspects involved, which are essential for the betterment of the deaf.

Method

Participants

The study included 32 deaf males and females aged 18-55 years. They were profoundly or completely deaf and randomly selected from all 31 provinces of Iran. The onset of their deafness was prior to the age of 2 years, and therefore they were considered pre-lingually deaf. A couple of interpreters who were a family member of the participants (parents or siblings) and some others with a hearing family were also interviewed and observed. To get more information on the hearing families' attitude towards deafness and sign language, their knowledge of deaf culture, and their means of communication, I also interviewed the families including parents and siblings.

Procedure

The deaf adults were naturally observed in conferences, meetings, homes, and Deaf Societies. The researcher also talked to them informally through ISL to prevent any anxiety, and wrote down their responses and her observations for the purpose of data analysis. The data was analyzed qualitatively using simple measures of frequency. The results of the project were recorded on computer. The participants' names were not included on the computer recordings, but instead numbers were used. They therefore remained anonymous to everyone apart from the researcher.

Result

The results of the study can be classified into three main groups: speaking to hearing people, deaf people, and the hearing who know ISL; and each group can be studied under six subgroups: the topics, the detail/depth, the discussion/analysis, humor/joking, private/secret talk, and direct talk (Table 1).

	Oral Hearing Interlocutors	Signing Hearing Interlocutors	Deaf Interlocutors	Interpreters
Topics	Limited	Various	Various and secret/private	Various, secret/private, problem-solving
Detail/depth	Superficial and physical	Deep	Deeper and more cultural	Deep and being influenced, but not accepting new ideas easily
Discussion/analysis	No discussion	Discussion but not accepting new information and/or easily influenced because of low world knowledge	Non-stop long discussion and sometimes check their information with the hearing esp. interpreters	Discussion but not accepting new information and/or easily influenced because of low world knowledge
Humor/joking	No joking or very limited if speaking to an old friend or family member	Joking, but not as much and various as with the deaf (less taboo humor)	Both normal and dirty Jokes/humor	Joking, but not as much and various as with the deaf (less taboo humor)
Private/secret talk	No private	Private esp. if they trust and need help as an consultant	a lot of private talks, unless they are afraid of being exposed in deaf community	Private esp. if they trust and need help as an consultant
Direct talk	Direct (if educated/more broad-minded less direct with this group or generally)	Direct	Direct	Direct

Table 1: Results of the study.

Oral Hearing Interlocutors

The participants all had limited speech with their hearing members of the family who did not know signing at all and had not made any attempts to learn it. They said they were stressed and frustrated because they had to struggle to understand hearing people's speech. Practically the families asked them nothing in particular but some simple questions regarding their immediate physical needs. However, if they knew ISL, they were happy to communicate with their deaf children.

For instance, when they entered the house, after greeting, their mother asked, "Are you hungry? Did you eat anything at school? Eat this and that in the kitchen. Do you have a headache? Have a shower, and then you will feel better." The deaf replied, "yes, hungry... what do we have to eat?"

Even though they had a comparatively close relationship with each other, still, according to my observations and their mothers' reports, they certainly had a much more limited communication compared with the hearing members. Participant (18) talked with her mother about the daily events at school, on the bus, and her friends briefly and generally. However, when she was with her deaf friends she had much more effective, longer, and detailed conversations on the same and other topics, particularly those related to girls; including clothing. This was because her mother did not know ISL and the participant's speech was not clear. After repeating three or four times the participant became tired and stopped talking with her mother. But she could sign with her friends and convey her message easily and efficiently. Her mother also believed that the range of her vocabulary was very limited and after finishing schooling she just started improving her reading abilities and expanding her words. She asked her parents the meanings of preliminary words compared with her hearing brothers. It is worth mentioning that the mother was very positive towards sign language and deafness which emotionally and cognitively had a positive effect on the participant (18). She did not know ISL because, at the time of

her daughter's schooling, oralism was dominant but at the time of the study she was trying to learn ISL.

The participants complained about their families who, in reply to their questions, said, "It is not related to you ... we cannot be bothered to explain it now" and did not spend time explaining to them the events happening around them. This lack of communication had prevented their families from understanding their needs, feelings, likes, and dislikes. Therefore, their families usually asked them unaccepted and unreasonable requests, e.g. being successful in different activities without having an interpreter, or exhorting them to marry the hearing individuals in order not to have a deaf child as a result of a lack of knowledge in this regard (the research has revealed 90% of deaf children are born to hearing parents [20]). A girl with very mild hearing loss from Bandar Abbas said, "Deaf people are apparently with their family, but as a matter of fact they live with Deaf Societies. They come to the societies to discuss their problems with their deaf friends or the interpreters just to get something of their chest" and of course if there were any solutions, they would welcome them. According to all the interpreters, they complained about their hearing siblings and families who did not pay attention to them. Or they suspected their hearing spouse of talking with a hearing person of the opposite sex and cheating on them. They thought that if the spouses were both deaf, they would match much better and would have a more comfortable life. The deaf also hid their secrets from their hearing oral families and would prefer to talk with their deaf friends about them because a lack of a common means of communication had resulted in the emotional and mental distance between them.

Interpreter (A) said once her two daughters came home and started talking about the events that had happened at school: their friends, studies, mark, etc. At that time she had a couple of deaf visitors. They were surprised as to how comfortably the girls talked about different topics with her and felt so upset that they could not have such a close relationship with their mothers. The available evidence has also shown, according to Greenberg and Marvin [21], profoundly deaf children

who lost their hearing pre-lingually are more sociable and form mature bonds/attachments if their mothers use both signing and spoken languages rather than those deaf children whose communication is done through an only-oral mode.

Films are one of the things that the deaf are mostly dependent on or rely on the hearing people around them. Unfortunately the participants were very upset at not being able to understand the films. They had problems with lip-reading, particularly with foreign films and cartoons. Therefore, they would prefer reading newspapers and magazines. Participant (20) (Interpreter (F)'s mother) made a story out of her imagination which mostly was not true because she and her husband did not want to interrupt their children to ask for explanations while they were watching the films. However, when Interpreter (F) noticed that her deaf parents were watching and interested in a film, she explained it voluntarily/willingly and tried to remove their wrong interpretations. The participants said they needed films with subtitles although Persian, as an oral language, is their second language and they had problems with reading it quickly and understanding the meaning of all the words. When they asked their family about the film, they themselves were busy watching it and postponed their reply to later or gave them very general information, which the participants believed was not enough, being very annoyed, angry, and bored. They had the same problems with conversation in parties or when the hearing members of family or friends were talking together or had telephone conversations. The lack of access to the sufficient input had resulted in boredom, depression, and cognitive problems (they could not achieve their cognitive potential).

As for the other side, the participants' mothers said they sometimes became tired of explaining the films so they usually summarized it or asked their deaf children to go to another hearing member of their family such as their father or siblings. But even when they put in the time to explain the films, the hearing families believed they could not convey abstractions and spiritual issues, and hence just gave a general explanation of concrete events. In some cases, including participants (12) and (13) (two deaf sisters), the one who had higher residual hearing was very helpful and translated the families' communication and explanation to her sister as much as she herself could understand.

Interpreter (C), whose whole family including his parents, siblings, and more than 70 people of his relatives were deaf, said his family watched all the films because he translated them into ISL. He said, "My families are different from other deaf people; as I have been translating all the films, lectures, and programs for them, they would not be convinced with general translation or lip-reading". They would like to find out every detail and do not miss any information". He believed his family enjoyed a higher level of knowledge and communication abilities than other deaf people because of the constant input through ISL. It is worth mentioning that although using sign language is very helpful, it cannot transfer all the abstract concepts and we need to discover certain methods of teaching, as we do employ them for both first and second language teaching [22]. "Neither spoken language nor sign language", as Marschark et al., [1] mentions, "has been shown to be a panacea for the observed lags in the language development of children with greater hearing losses". Kimani also confirms that "While language and communication are perceived as the main problems encountered by deaf children, it is assumed that if teachers and learners are able to communicate through sign language, deaf learners can learn ... although proficiency in sign language among teachers does play a great role in the education of deaf learners, it is not sufficient in offering quality education in this context [23-24]. Other

needs of deaf learners should be addressed during the teaching and learning process through appropriate teaching and learning materials and teaching and assessment approaches". It is not a place to discuss this topic here.

Participant's (6) mother occasionally recorded the films for her daughter and explained it later when she was tired and could not do it at that time/simultaneously. As a whole, the participants said they were embarrassed to interrupt their family in order to ask questions so they gave up on watching films or ignored their partial understanding or possible misunderstanding. Therefore, they did not have the power of analyzing the films and (the) similar events in real life.

Signing Hearing Interlocutors

The hearing people, who are in constant contact with the deaf, whether they have deaf family member(s) or are the interpreters who independently work in the Deaf Society. The interpreters participated in this study had deaf parents or siblings so they knew the deaf culture and language well and were considered native signers. For the same reason the deaf individuals liked them and were willing to talk with them about all their secrets and problems comfortably. In fact, the interpreters had been integrated and accepted into their community. They were even closer to the deaf than their hearing family. For instance, Interpreter (C) stated that once he was in a hearing family whose deaf son came home. He greeted his family very formally and left the room. Later the interpreter asked him why he did not talk with his family in a friendly way. He replied, "This is because they don't know ISL. so what can I tell them?" It is worth mentioning that, because of this issue, the deaf individuals do not trust anybody as easily and quickly as the hearing people usually do. This is very natural as they are a minority group whose language, culture, etc. are totally different from the world around them. Hearing people also face the same issue when surrounded by a different culture and language in another city or country. We all need some time to become familiar with each other in order to be able to build trust although the time may take longer when both hearing and deaf people are involved because of the different channel of sign language besides the different language and culture.

The participants were very dependent on the interpreters who were trustworthy and helpful. They appreciated their time spent with them to help them out when they needed to go to the bank, doctor, shopping, etc. saying, "you are very kind and understanding. You come with us when we need you but our families only think of themselves".

The interpreters said the deaf people sometimes send messages and asking them to watch a series on TV explaining the episode to them the next day at the Deaf Societies. If they did not understand the meaning of a word, they would usually ask the interpreters in an SMS.

Therefore, in fact, the way we encounter the deaf people affect their life. This confirms the result of the research conducted on the Al-Sayyid Arab-Bedouin's use of an indigenous sign language: "the common familiarity with deaf people and sign language facilitates the production and sharing of a unique experiential knowledge, grounded in daily experiences and practices. In this context, deafness is not easily subjugated to its medical model. However, encounters with the medical and educational establishment present a series of challenges that may severely exacerbate deaf people's structure of opportunities" [25].

Signing Deaf Interlocutors

Deaf parents, according to Sacks know how to communicate with their deaf children because of their own experiences; they know that all the communication, interactions, play or games must be in a visual mode, particularly 'baby talk' should be done in a visuo-gestural way [5]. Hearing parents, no matter how caring they are, cannot provide visual interactions being auditory beings themselves.

Compared to the narrow and limited topics of conversation with their hearing oral family, the participants talked endlessly whether with their deaf¹ or hearing interpreters who knew ISL. Certainly they felt more comfortable with their deaf signing family members or friends as their informal interpreters. However, they would prefer and enjoyed talking more with hearing interpreters rather than a hearing person who had no knowledge of ISL. ISL is quite different from Persian, and users of ISL often have sociocultural norms that differ from those of the majority hearing culture. As the participants did not have access to deaf signing interlocutors in their daily life, thus when they met each other, they talked continuously; amazingly they seemed not to feel hunger, tiredness, sleep, family worries, wasting/passing of time, the reason they came together, responsibilities, commitments (at work, home, or any other places), etc. They just talked and talked to compensate for their solitude at home or in the society. This was sometimes very costly for them because it could result in the loss of their jobs; a deaf business man said he did not employ any deaf people anymore because the use of their hands would require them to stop working. He believed that a deaf individual could make one T-shirt a day compared with a hearing person who could make 15. Their willingness to communicate can be compared to hearing people who although they start talking from the time they awaken until the time they sleep, and perhaps even during their dreams, they still do not feel it adequate (but the deaf do not have such an opportunity unless visiting the Deaf Societies or incidentally coming in contact with a deaf person during their days).

Topics

When the participants talked to their hearing families at home, it was very restricted to their daily needs so they would usually prefer to go to Deaf Societies and meet their friends; when talking with their friends, they talked about a variety of topics including marriage, work, their spouses and children, the other deaf people's life, travelling, discrimination against their hearing siblings, distress and disappointment at their family Whom they may have been of the opinion that they did not liked them, anger at their mothers who did not cook their favorite food, inability to understand their teachers or lecturers at school/university, the events happened the night/day before, and if they went to a conference they would mostly talk about the humorous events or songs, not about the contents.

As the participants were a minority community, it was natural that they talked concerning both hearing and deaf individuals, whether family members or outsiders. If married, their topics were mostly around their spouses and children, e.g. how they supported and helped their children and spouse, about their sickness, their requests to buy certain things, their marriage, etc. If unmarried, they would complain about parents and the arguments they would have, or talked about

meeting the opposite gender in the street, their family/siblings' explanation or refusal to explain a film for them, etc.

Participant (1)'s mother said her daughter did not start talking about anything unless she (the mother) asked her a question; she did not automatically, like her hearing children, reported back what happened to her while she had been out of home. This was because her mother and other members of her family did not know ISL and had limited oral communication. She mostly talked about her immediate daily needs, such as buying a dress. She was also interested in knowing about the news and films when shown on TV, which her family generally but not in detail, explained to her such as if a war broke out or a bombing. Her mother and her brother's wife usually took on the responsibility in explaining to her the films when requested. However, she had mentioned often requiring greater or more detailed information and her family often being too busy to talk or unable to convey the information orally. Therefore, she tried to be patient; many times and innocently, she repeated, "I try to be patient". Although they do not have effective and qualitative communication, the participant had a more positive feelings and general knowledge compared with the other participants because of this restricted communication, of which others were deprived.

The participants did not usually talk about politics. If they did, whether they misunderstood or exactly copied their hearing families' ideas/opinions and were unable to analyze the political issues independently; for instance, they simply talked, better to say quoting topics such as those concerning the president, inflation, and the Iranian targeted subsidy plan. That is why, they were easily influenced by others' viewpoints; one could change their beliefs readily in just a few minutes. Those who had a regular interpreter (a hearing member of family) were more knowledgeable and had more analytical minds and abilities.

They generally did not show interest in abstractions and spirituality due to the greater degree of difficulty and, in a majority of cases, impossible to be handled through Persian as an oral language (Iranians' mother tongue). The topics that were more concrete and could be physically felt through the participants' senses, excluding the sense of hearing, were travelling, marriage, clothes, cars, houses, etc. For instance, according to participant's (6) family, when the participant came home, she usually asked, "What's the news? Who telephoned? Where do you want to go? Did you go to the court for your (stolen) car? etc." [22].

Indeed the most difficult topic asked by the participants was those relating to spiritual and abstract issues. As religion, morality, and psychology involve a large number of abstract concepts, the related subjects were very difficult for them to understand. The participants' parents including participants' (12) and (13) said, "When we go to the mosque for a lecture or there is a lecture on TV and our deaf children ask us what the lecturer is saying, we really do not know how to convey the information". They usually tried to summarize it in one or two simple sentences because they believed the deaf individuals cannot understand abstraction. However, interpreter (C) was able to translate the whole lectures for his all-deaf family through ISL; as he was a native user of ISL and was acquainted with deaf culture, he knew how to translate to make it easier for his families to comprehend. This reveals that deaf individuals have no mental challenges when it came down to abstract perception, but that the main obstacle is means of

¹ By deaf interpreters, I mean the family members who had a better sense of hearing; they usually interpret for the profoundly deaf informally when necessary. Otherwise, as a rule, an interpreter must be hearing.

communication. If the hearing family members could talk ISL, a great deal of the problem could easily be solved.

Limitations on communication and topics led to the participants' narrow range of vocabulary. As an adult, they still had problems with the meaning of basic vocabulary including volunteer, hopeful, fair, just, I'm busy², that's my pleasure, I'm free, and you deserve more. It was obvious that this problem was particularly faced by those participants who had more limited communication and less educated families (who did not realize the significance of communication and education on mental development, and were not motivated or interested in reading).

Detail or Depth

The participants talked generally about the events without reference to specific details or facts as their hearing parents or other family members usually did. They broadly gave the information on recent news that they heard from their friends or watched on TV leaving the details. The participants, including participants (1) and (23), told their family simply about the occurrence of an earthquake in the world/Iran. However, they talked with their deaf friends about the same topic for a long time and in more details; they talked about the death toll and the houses destroyed. It is worth mentioning that both lack of effective communication with the world and visual characteristic of deaf culture and language had affected the content of their speech. In other words, the participants mostly talked about the visual or physical aspect of the earthquake, Such as people and buildings. They did not discuss the reasons for the high damages, humanitarian aid (the countries offered help, whether it was accepted or not), its size, the subsequent incidents that took place, the speed of aid received, the people's or government's cooperation, prediction and preparation for the earthquake, earthquake building design/ earthquake-resistant structures, prone areas, effective speed of action concurrent to the earthquake, etc.

As another example, the interpreters and families pointed out that the majority of the participants usually asked about exciting and concrete events such as a murder (why was she/he killed in that film or news?), twins on news, car accidents, etc.

According to interpreter (E) and in the confirmation of the impact of effective and constant communication, the more communication we have with the deaf individuals, the more knowledge and analytical mind they are able to develop. She claimed participants (22) and (23) (her brother and sister), were very different; the interpreter, being very close to her brother, had more communication with him about different subjects, he could think, analyze, and discuss the events more Completely and with a greater detail and depth than his sister. For instance, when watching the world cup, apart from the conversation on the games and the results which Took place between her sister and other deaf individuals, he talked about the news or issues usually involved in/around the competition (e.g. why did the world cup committee keep silent on this and that issue?).

The participants who had a religious family usually expressed, "God becomes angry if I commit this sin or do wrong". However, they could not profoundly explain the effect of the wrong doing and how it might negatively affect their life and society. They had serious problems understanding the abstract concepts and analyzing it in depth.

Participants (12) and (13) (sisters) had very long communications through ISL. They stayed up until late at night for two or three hours simply communicating. When the latter travelled with her parents, she said she would like to go back home soon just to converse with her sister, as their mother said. They did not feel comfortable with the hearing members of their family, did not make an attempt to speak Persian (despite their mother's demand and insistence), and the former married a deaf boy. Like other deaf individuals, when participant (12) came back home from a trip with her husband, she reported back the general points to her mother, for instance, "We went to Arak, then to Tehran, then to Qum, I performed pilgrimage and prayed for you there. Later we went to Shah Abdul Azim, I prayed for you and put money into the shrine. We went to my husband's brother..."

Discussion or Analysis

The participants did not analyze the news, films, political ideas, and any other events happening around them. Thus, they were much more affected than the hearing people. The news that they were mostly interested in was the gold and dollar prices. Even in that situation they did not ask the reasons for the rise and decline of prices but they just checked if there had been any daily changes.

They, for instances, did not follow and discuss the psychological, financial or physical damages caused by an earthquake on the country. They just learned and conveyed the information on the occurrence of an earthquake in a city that generally caused a lot of physical damage; the death and destruction that were visibly portrayed through films. They were also interested in other tangible topics such as fruit benefits as well as emotional events but could not understand the issues deeply neither did they discuss them with their families. Certainly interacting and communicating with families and friends gives us a lot of insight concerning a film. Interpreters (A) and (B) believed that if we talk to the deaf about a film and stimulate or encourage them to think about the events, they could gradually learn to think deeply and analyze these films. Interpreter (A), for instance, said while watching a film on TV; the deaf just talked about the physical or visible behavior such as the number of wives the man had and what he did. But when the interpreter told them, "I think the second child is going to become a king", they started thinking why the first one could not but the second one could. This showed that if we communicate with the deaf using sign language, we can teach them not only the language but also all the social behavior and abstraction involved in it; how to analyze and infer something from evidences or based on information available to them.

The consequence of this inability was the problem expressed by the participants' hearing families. They believed that their deaf family members were very demanding expecting too much of them and welfare organizations/agencies; they were unable to analyze, relate, and infer the issues. Hence, they did not work and asked their families to buy houses and cars, pay for their clothes, travels, conferences, etc. They would prefer to travel by airplane although they and their families could not afford it. When they decided to travel or do something, they would do it spontaneously and only gave a few hour notice of requiring them to chaperone them. If their families working or busy and unable to be ready on time, the deaf individuals would leave the house taking risks of driving long distances alone. Participant (25) left the conference without notifying friends and families simply because of a minor issue she was facing with a friend. This caused a lot

² The four last phrases are expressed in idiomatic forms in Persian. Some of them can be also used in non-idiomatic ways which are easier for the deaf individuals to understand.

of worry and concern to everyone involved. Hearing people may also be guilty of the same irrational behavior, but the degree and intensity of their occurrence is much lower. In fact, because of the participants' inability to analyze family, moral, and social issues adequately the problems seemed more serious and unsolvable.

Humor/Joking

Since deaf people's humor and jokes are visual, physical and tactile, conforming to the result of Sutton-Spence and Napoli's study [25], it would be difficult and at times impossible to express them in any oral languages. This is because deaf people in general and signing in particular are visual. I will try to explain or clarify them as much as possible.

Participants (1), (2), (3), and (4) were talking together in ISL about different topics. They were also joking, for example, participant (3) said, "I'm addicted to sweets, I eat a lot of sweets everyday so my wife counts them before she goes to sleep. At 1 a.m. when she is asleep, I take one and then re-arrange them so that she does not realize when she sees the box..." He also said, "Sometimes I drink milk and add water to the remaining milk. It still looks white and nobody realizes..." or "Last night I was bored and wanted to have some nuts. So I folded the shells in a tissue before throwing it away so that my wife wouldn't realize..." All the deaf laughed and of course he was only joking, his wife would never criticize him unless he overeats. As evident, all his joking was about the visual or physical structure of the sweet, milk, and nuts/tissue.

Participant (5), while practicing to act in a film, ordered a large variety of food in a restaurant. When his friends asked him how his wife, sat on the opposite side of the table, could see his hands when signing, he replied, "Don't worry, if the food is pile up on the table, I will sign on top of them so that she can still see my hands". When he was practicing another dialogue on "Meeting two old friends", he said he had two children and then while he was asking his friend if he was married, he bent naturally and hurriedly to prevent his little child from running into the street. On three separate occasions I recall his friends breaking out in laughter when remembering this event. When I asked them the reason, they told me the story. The same participant in another film who should have taken his mobile out of his pocket, as the cameraman prepared the camera, pretended to have a huge mobile and instead of using his fingers he used his whole hand to dial a number.

The peak of their humor can be understood when at the conferences more than 200 deaf people were joking, during the breaks in the middle or end of the programs in the middle of programs or at night after programs. At times it took so long until 5 a.m. Participants (8) and (9) usually went on the stage and whether it was humorous/performances, telling jokes or imitating other people's behaviors (hearing or deaf) (the latter seems very surprising for the hearing and is unacceptable based on moral principles/norms but suitable and normal in deaf VISUAL culture). The deaf really enjoyed this kind of program and constantly requested the participants to do it, because it was visual and through ISL. However, when they were with their non-signing hearing families, they would not express this same humor.

Among the jokes that belonged to the hearing individuals, they chose those that could be performed visually and understandable through ISL and deaf culture; those which were concrete and contained physical actions.

Participant's (18) mother said her profoundly deaf daughter liked her two young hearing brothers a lot and played with them but her humor was mostly physical, such as, pushing or pulling them around.

The humor the participants displayed with their hearing non-signing families was totally different; instead of making jokes or improvising/and creating a humorous situation, it was usual for them to use prewritten jokes used by hearing people (e.g. SMS on mobiles). They said their deaf children usually showed them the jokes or humorous messages on their mobile. Sometimes they needed clarification to understand the jokes.

Private Speech/Secret Talk

The participants did not talk about their private issues with their hearing parents and family members but talked with their interpreters as a close friend because they shared a familiar language and culture and even had relationships with the participants' deaf family members, relatives, and friends. Of course, if they had committed an action that was against family rules, they would hide it even from their deaf sisters or brothers, particularly if they suspected their siblings might disclose it; such as having an opposite gender friend.

Participant (1) talked generally about the events without reference to a specific object or instance. The participant's mother said, "She usually gives the general information and leaves out the peak of her story". In fact, applying this technique, she could leave out some details and simplify the story in some useful and skillful manner in order to keep details secret.

Participant (19), according to Interpreter (A), faced a big problem but she did not even talk to her mother about it. She was working with a signed songs group and had a misunderstanding about the financial issue in the group. When the interpreter called her mother to explain about the misunderstanding, she realized that she (her mother) had no knowledge of the problem. The participant had told her deaf married sister about it, but not her hearing mother who did not know signing.

Participant's (18) mother pointed out, although she made an attempt to have a very close and intimate relationship with her daughter, and even her daughter's deaf friends envied her (the participant) for her kind and caring mother, the participant had long conversations on the private topics regarding 'marriage' or other issues with her friends, but not with her non-signing mother.

All the participants were willing to speak to the interpreters about their secrets asking them for help if they encountered problems that they would not like anybody else to find out about. For instance, interpreters (A), (G), (H) talked a lot about the marital and sexual problems which they were facing. The interpreters took the responsibility for their physical and psychological help and treatments.

Direct Talk

The last specific characteristic of the deaf individual's speech was directness, openness, and clarity. As sign language is a visual language and the deaf are very visual, they talked clearly and directly about different topics; this was not always in accordance with the norms of the hearing society, which they were a part of. Although clarity and directness are good qualities and often necessary to avoid any misunderstandings, they may deviate the principles of certain moral or cultural norms and offend hearing people. Of course, by the passing of time the deaf people have changed some taboo signs to become less direct. For instance, participant (2) said the sign for 'mother' was like

'breastfeeding', putting index and middle finger around the nipple, but now it is signed by a fist moved on two close parts of the chest to show 'like' and 'hug'. Karimi [26], in her Master's thesis, points out that the variables such as age and education have impact on the use of indirect speech with the elder and less educated ones preferring to use more direct speech.

The sign for boy, according to participants (29) and (30), has also changed to a flat hand palm down touching forehead, while the fingers pointing toward the left and move outwards. The participants, however, insisted the old deaf people do not understand the new sign, and thus the old one was still used by some deaf individuals.

During a study on the sexual problems of deaf girls (conducted by a hearing psychology student), that participant (4) and interpreter (A) were helping out for interpreting, we found out more about how clear and open the participants talked among each other about intimate issues such as sex even though they tried to substitute certain words with those that were less offensive.

Interpreters (A), (B), and (I) expressed the direct way of the participants in joking with each other when they travelled together and in the Deaf Societies.

Participant's (18) mother said she did not teach her daughter the names of private parts of the body but she picked it up incidentally in conversation with her deaf friend. When the participant came back home, she criticized her mother for not having taught her the words. Learning the word and its meaning without its supra-linguistic elements caused her to use it openly (like any other words), as her mother blamed. Thus her mother explained to her that she could not use it before other people so freely because it was a taboo word.

The clearness of the taboo subjects and words was not the only case in this regard, but the participants used the same factor when they talked about a person with a specific disability in their body or habit. It did not make difference whether that person was a popular and very loved person; they just showed the problem or wrong habit directly, for example, medical condition in hands or legs, touching a nose, spotty cheeks, injuries (cut/burnt scars) on forehead or hands, hair on chest, broken ear (although had been healed and no scar left), being obsessive compulsive, one-eyed person, etc. When I told participant (29) and (30) that they could use other sign for that particular person as s/he has a lot of good characteristics, they were surprised and laughed; they said, "But this is deaf culture and language...very usual for the deaf".

Receiving more input through effective communication with the hearing or deaf families resulted in more knowledge on culture, moralities, religion, and social behaviors, which in turn led the participants to understand more of the pragmatic aspects and connotation meanings of the signs/words and the content. This made them more careful, cautious, and alert when using the words. Taking part in the conferences had a great impact on this issue.

Discussion

The result showed that the deaf participants who did not have deaf or signing family members or an accessible interpreter could not develop an analytical mind. This issue had narrowed down the participants' world to their own limited life, thought, and attitude; it was nearly impossible for them to understand the reasons or philosophy behind some of the people's the actions around them. That is why, they lacked feeling and hence enough sympathy for their family problems. For example, participant's (1) mother said her deaf daughter,

although more understanding than her deaf friends in some issues due to a higher level of communication among them, was very demanding; she asked her parents to buy her new dresses every season despite the fact that the need was not there. This might be because there was not an intimate relationship between the mother and her daughter, which is usually created by effective communication; the mother herself confessed her daughter had closer relationship with her brother's wife than her. Participant's (18) mother, however, said her daughter was understanding and content because of their more intimate relationship and interactions; the mother tried hard to explain the issues that they were involved in and convince her daughter when needed.

Participant's (6) sister said that she (her deaf sister) was too demanding and could not understand her family's financial situation. Every day she asked her parents to buy a house, car, etc. for her. Also she could not comprehend that they were busy and had their own work and family commitments. She sometimes told them, as explained in part 'Discussion or Analysis', the day after would like to go to travel (to cities 7 or 13 hours from her own city) saying, "If you come, that's ok otherwise I'll go by myself". Then when her family could not make it, she just took the car and drove alone leaving her family stressed and worried. As discussed above, we need to look for the reason in the family's means, amounts, and ways of communication. The participant's (6) mother had a negative attitude towards sign language. She tried hard to teach her to speak Persian fluently and punished her if she signed, for example, as a child when the participant pointed to the water, her mother did not give her water unless she uttered the word 'water'. She took her to different classes including music, English, computer, etc. but because of lack effective communication, the participant could not understand the main reasons of attending in the classes, the aim of her life (which is development), the necessity of work and doing activities for improvement, etc. Thus after taking some lessons, she stopped going and practicing the skills she learnt. Gradually she forgot all the knowledge she gained, which had a high negative impact on her and her family, particularly her mother. Her mother said she suffered a lot as a result of her actions and her lack of motivation; she did not recognize that she herself was the reason for this dramatic mental illness and health.

The current study found out that exposing the deaf people to the sign language causes a dramatic change in their communication and consequently on their cognitive, social, cultural and affective development. All the interpreters reported on some isolated deaf boys and girls whose families could not speak ISL and did not even make an attempt to communicate with their deaf children. Some of the deaf individuals lost not only their little ability to speak Persian but also their native sign language (ISL). The interpreters encouraged their family to take them to the Deaf Society and allow them to have contact with other deaf people. At first, they felt very shy and became so stressed when they wanted to communicate with a deaf or hearing person. Gradually they became so interested that they spent long hours in the Deaf Society to help out. Interpreter (C) said a very isolated boy from an all-hearing family who were blushed when he wanted to sign the first time he came to the Deaf Society changed amazingly; now he would choose the whole night working on projects over a relative's wedding because he could communicate with deaf friends. According to Interpreter (B), after involving and socializing with the deaf people, these isolated deaf persons asked a lot of deep questions about Islam or religion, God (e.g. why cannot we see Him?), Imam Hussein (P)³, hell, etc. These are the questions usually asked by a 3-year-old child normally exposed to too much language input in their daily normal

life. The deaf persons who start communicating late pass the same processes, but much later in life.

Through analyzing and discussing the data, it was evident that spending only limited hours a day on communication with deaf individuals, whether as member of a family or as an interpreter, is certainly not enough. It does not provide the sufficient input necessary for a normal life. Therefore, even the interpreter (C)'s all-deaf family, as he stated, were not acting at an equivalent level as hearing people although he was constantly busy interpreting all the TV programs and events surrounding them. This was because the interpreter was the main source of their input and certainly was not enough; when he went to university, work, and other places, his family missed a great deal which could not be compensated by an hour in the evening. They were sometimes too narrow-minded because of having inadequate input/knowledge. The hearing people are in constant exposure to quality input through a variety of sources including TV, radio, computer, lectures, people passing by or talking in the background, etc. whether in the form of speech or written language. The lack of enough input made the obvious issues unbelievable for the deaf. For instance, interpreter (C) said, "Sometimes I translated a piece of news or speech, e.g. prices of something, for them but they did not believe so I left the room". It means something that is not incredible for a hearing because of vast amount of world knowledge or is difficult to believe at first and then by explanation of a trustworthy person is clarified, was impossible for his deaf family.

The interpreters and the hearing family believed that the deaf people including the participants are very superficial and unable to think deeply on an issue; consequently they follow other people's ideas or attitudes and are easily affected by them. They do not comprehend the spiritual issues and relations, thought, feelings, and culture. Merely the physical meaning of the words including love and marriage were accessible or understandable for them, and they miss the depth of these concepts. In fact, they mostly understand the concrete or physical things, i.e. the visual events. For instance, according to the girl with a mild hearing loss from Bandar Abbas, "Although they consider me very clever and helpful; when the deaf boys and girls have any problems, they all come to me. Most importantly, even when their mothers are accompanying them, they (the mothers) tell their deaf children to ask me for help as they think I understand and know what to do, but they still consider me disabled or crippled just because of a small problem on one of my feet".

The participants (10) and (11) said they did not have any feelings for their close relatives or friends who passed away. Even when their family asked them to pretend to be sad or cry (because it was not good in their culture to show no feeling) in their funeral, they said, "but I cannot cry...". In response to my question as to why, they said it was because they could not communicate with the hearing so did not know them on an emotional level and could not create a close relationship through an effective interaction or exchange of feelings and ideas.

The participants talked about the considerable improvements that the conferences make in their life quality, morality, social behavior, world knowledge, and so forth. For example, when there was a speech or lecture that was delivered by a deaf or a hearing person and translated by an ISL interpreter, they could understand and receive a good amount of knowledge. Conferences were also a good opportunity to motivate and activate the deaf people in the host city; they had to prepare a play, signed song, pantomime, lectures, and be involved in a

lot of social interactions needed for organizing a conference (including managing the lecture theater, dormitory, sightseeing/visiting historical places, inviting people, food, prizes, certificates for workshops, etc).

One of the negative effects of the communication barrier was that the deaf participants could not develop suitable social behaviors such as a good sense of judgment. They were influenced by people very quickly and accepted their ideas and jumped to conclusions without finding out all the facts. This was what the participants complained about because it caused a lot of damages to their marriages and friendships.

Other impacts were related to politics and religion; they were in danger of being easily influenced by political issues and simply changed their ideas to copy or follow others' viewpoints. Among the participants, some had been misused to sell anti-moral and religious CDs or perform anti-religious or social behavior and activities.

They often kept secrets from their hearing families often resulting in life endangering situations and impaired further life improvements. The sufficient input made them know their families character and their reasons for preventing them to behave in certain ways so they could trust them. They also learned more about the impact of the signs/ words in different cultures and the differences of social standards, and hence became more cautious about using the taboo ones among the hearing and deaf societies/individuals.

Conclusion

A lack of communication has caused serious problems among the deaf people, regardless of their age, hearing loss, and gender, including deprivation from the world knowledge, scientific research, comprehension of abstraction, and understanding the people's or families' thinking, ideas, and attitudes. This is because language and communication is related to, or better to say, has a central role in cognitive, social, emotional, and academic development. The problems have diminished their information and knowledge into that of children, which in turn has reduced their life quality. They usually do not have close relationship with immediate members of their family. Communication barriers have often made them into people with lack of feelings and sympathy usually expected by their hearing friends and families. Whether they have a tantrum or become depressed when being forced to tolerate and are not explained/justified about the events happening around them. The third alternative is that they usually leave home to join their deaf friends in order to find the lost happiness out of their home. The latter has led to critical moral and social problems.

The limited content of the hearing people with the deaf people in this study indicates that the latter cannot communicate in an oral language competently, and hence sign language (ISL) should be considered as the deaf people's main means of communication. It is worth mentioning the input should be constant and effective.

The lack of effective communication among deaf children with their hearing parents leads to different social relationships among them, for instance, the participants could not trust their families and also were unable to learn the social norms and principles of morals. This confirms the outcome of several studies which indicate hearing mothers, particularly when using oral language, tend to be more directives and have more control over their deaf children, not allowing them to have trial-and-error experiences in learning and a healthy

³ Imam Hussien (P) is the third leader of Muslims, Shia sect.

mother-child connection (see, e.g., [27,28]). This is because the mothers feel their children cannot defend themselves or want to protect them from any possible problems [29]. This study, therefore, suggests the families, educators, and all the people related to the deaf people to use sign language to enrich their communication; this will provide the deaf individuals with equal opportunity to enjoy the communication benefits and grow in cognitive, affective and social aspects of life.

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