

# The Level of Verbal Communication among Students with Down Syndrome

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## Abstract:

The current study is an attempt to identify the level of verbal communication among students with Down syndrome. It was applied to a sample of (30) students with Down syndrome, enrolled in the Intellectual Disability Program, within Inclusion Program in Najran. The study adopted Verbal Communication Scale (VCS). The results showed that the level of verbal communication among the students with Down syndrome rated (1.94) with an "acceptable" level. The means of students' scores on the scale's dimensions (Naming, Imitation, Identification and Understanding, Expressiveness and Attention) were (2.07, 2.04, 1.98, 1.86 and 1.75), respectively with an "acceptable" level for all dimensions. There were also statistically significant differences between the means of students with Down syndrome's performance due to the educational stage (Primary and Prep), in favor of the Prep stage.

**Keywords:** Verbal Communication, Down syndrome.

## 1. Introduction

Language acquisition and communication are of the key skills over the first five years of childhood. In addition, the ability to have the vocabulary and appropriately using language in communication is a clear and key issue in acquiring life experience; cognitive, emotional and social development; and adjustment with the requirements of social life. Language has a social function as a means of communication and understanding, where a person linguistically interacts with others by listening and making sentences to communicate better. It also has an intellectual function of making concepts. Furthermore, it has psychological and aesthetic functions of expressing self, emotions, taste and perceiving beauty.

Children with disabilities often suffer from deficit of senses with a kind of deficiency in communicating with others. This makes it difficult to express their needs and desires (Kumar & Dutt, 2010). That is, they are unable to understand others and some of them cannot speak, make gestures wrongly or respond in case of being communicated. Some children of this class manifest stereotypical playing style with ordinary ones. They may sometimes interact with or inquire about the surrounding environment but this is not always the case. It also declines if the disability is severer because their communication is harder and they do not express feelings towards what goes around. Consequently, it becomes difficult to grasp the attention, provoke or observe any interaction by such a child (Heward, 2009).

### 1.1 Verbal communication

Communication is a fertile and comprehensive process of the exchange of ideas, opinions, feelings or information between two persons or more to make a positive change and affect others using verbal or non-verbal symbols.

Many intellectually disabled children suffer from the low- level of linguistic performance skills when expressing their needs and desires; and emotions and feelings towards others but the surrounding people fail to understand their requests and feelings. Consequently, their interaction in situations that require using vocabularies and organizing events in a logical form is negatively affected. Hence, they experience inferiority, offensiveness and bad psychological and emotional adjustment (Shash, 2002; Elsayed, 2005)

Verbal language is a form of communication that allows a person transfers information in an accurate and detailed way. It is also one of the most significant means of human mutual understanding, by which a person can form words indicating certain familiar meanings and depends on significances of organizing community relations and expressing feelings. Such verbal communication includes all pronounced vocabularies and phonetic symbols (Shoqer, 2002). Therefore, it is represented whether spoken or written, and without it communicating deep meanings, ideas or feelings to others become impossible. Hence, words used should be known and understood by others to be a successful communication (Kherbash, 2004).

According to Jane (2008), the majority of children with intellectual retardation face communication difficulties because of the difficulties of receiving, processing and storing information. In addition, they take longer time in acquiring words compared to the ordinary ones and that they have a low level of abstraction. Therefore, a person needs a near future to that of his training to develop verbal and non-verbal communication skills. Children with Down syndrome experience cognitive problems that affect the improvement and development of linguistic skills. However, this does not mean that they suffer from these problems, most of them, at least, suffer from a part of these disabilities. When such problems exist, they strongly suffer language and

speech (Pieterse et al, 2005). Linguistic problems are a distinctive feature of those with Down syndrome. Hence, the linguistic performance of a child with Down syndrome is less than that of the ordinary one. This may be also caused by the weakness of linguistic vocabularies, the weak ability to express self and failure of verbal communication with others. The most significant linguistic problems facing those children relate to fluency and vocabulary quality. In addition, it is noted that the vocabularies used are simple and do not match their chronological ages (Elqareouty et al, 2001).

Additionally, their low vocabulary and paucity compared to that of the ordinary cause weakness of skills in understanding others and inexpressiveness of needs (Kiarie, 2008). Furthermore, when there is an increase of the number of words in a sentence, there is a rather bigger difficulty of pronunciation and vocabulary acquisition as well as problems of elimination, alternation and articulation of letters and words (Laws & Gunn, 2002). However, many studies, e.g. (Vinter, 1999; Céleste & Lauras, 2000; Müller, 2007; Lacombe & Brun, 2008), report that there is the difference between ordinary children and those with Down syndrome is attributed to the degree of linguistic development. They note that the linguistic development of children with Down syndrome is slower than that of their ordinary peers. Williams (1994) believes that language requires cohesive systems and that any weakness in them causes language disorder. Such disorder occurs in the receptive section and is manifested by the inability to understand vocabularies and connect words to works and paragraphs or selecting words to make new sentences appropriately. According to Adlong (1993), Eldosary (2008) indicated that the occurrence of expressive language problems with the intellectually disabled is caused by the unavailability of verbal and social interaction for this class. That is, exclusion and deprivation of acquiring life experience affects the development of their cognitive and linguistic abilities. Hence, speaking and using language for children with Down syndrome have a key significance, despite the physiological and cognitive problems of their articulatory system. They most likely face many challenges that appear in the deficit of the available linguistic abilities. Such problems affect communication skills and therefore they should be identified to design educational programs.

In this context, Rondal & Buckley (2003) report that children with Down syndrome have varied and developed vocabularies, unlike the ordinary ones of their chronological age and linguistic phase. These children use more vocabularies in speaking to their mothers, playing time than the ordinary children. Such linguistic development occurs because their (old) age reflects increase of linguistic and non-linguistic experience and that vocabularies are a direct result of environmental experience, unlike appearance and other linguistic aspects. Vinter (2002) illustrates that children with Down syndrome of the simple intellectual retardation retard in speaking but as they got older, they have a rich and an understandable language that allows communication with others. However, the language of those with moderate and simple intellectual retardation is rarely void of linguistic disorders. Furthermore, the deaf are common among children of severe Down syndrome. In addition, their language level is primary and speaking is deformed and incomprehensible. In this field, many studies were conducted on students with Down syndrome concerning verbal communication, expressive language, language disorders and reading. Studies indicate that there is a high incidence of language and speaking disorders among the intellectually disabled, rating (71.3%) according to the type of disability (Memisevic & Hadzic, 2013). There is also deficit of the linguistic skills, whether receptive or expressive, that is manifested in speaking style, vocabulary incoherence and inconsistency of speaking (Abbeduto, et al, 1995; Kahn & James, 1996; Facon, et al, 1998).

In addition, they have difficulties in describing certain concepts, e.g. time, yesterday, next week; relative problems, e.g. smaller or bigger (Jaafar, 2001); and problems related to the quality of vocabulary, i.e. they use simple vocabularies that do not fit their chronological age (Alogozzine & Ysseldyke, 1990). They experience retardation of using one word to using two while speaking as well as their developmental retardation in developing communication (Iverson et al., 2003). They use very short simple sentences and have a high ratio of mistakes concerning complex sentences of all parts of speech: articles, nouns, verbs, prepositions and syntactic structures (Vicari et al., 2004). A clear weakness of linguistic structure, sentence imitation and low performance with the length of speech, action verbs, verb conjugation, noun clauses (Eadie et al., 2002) is manifested. There is also a clear difference in the nature of imitation, ability to retrieve and storing words, sentence's length and problems of sound (Sokolov, 2000). They also suffer from speech and language deficiency. So, they fail in reading and writing acquisition resulting from the skills of minor phonological awareness. In addition, the awareness of micro linguistic and semantic cognitive structures affect their ability to decode texts (Kay-Raining Bird, et al., 2000; van Kleek, et al, 1998; Gillon., 2000; Webster, et al., 1997). Additionally, they experience difficulties of attention, recalling, distinguishing concrete paragraphs, recalling especially short-term memory, thinking and imagination (Kherbash, 2004). Elsaby (2004) mentions that there are problems in making the concepts of numbers, colors and time.

Many studies report that the rate of linguistic development is strongly related to age; the older children with Down syndrome are, the more their communicative abilities become and the clearer their speech is (Kherbash, 2004; Coppini & Gatt, 2015; Lacombe & Brun, 2008; Müller, 2007; Rondal & Seron, 2003; Céleste

& Laurus, 2000) . In addition to the importance of inclusion for intellectually disabled concerning its effective impact in schools on improving the level of social and linguistic skills and self- concept for those included from one to three years (Elkhashramy, 2004); and the effectiveness of learning environment in improving social behavior of included children with those enrolled in special education schools in the United States of America (Freeman& Alkin, 2000). In the field of designing and developing the linguistic scales (Kherbash, 2004), many studies were conducted reporting the impact of intellectual age, chronological age and distinguishing age groups in performance on the paragraphs of the scale, such as (Kherbash, 2015; Shaheen, 2015; Elrosan, 1995).

### 1.2 Statement of the Problem

Many intellectually disabled children suffer from the weakness of linguistic performance skills when they express their needs, desires and emotions; and their ability to imitate, nominate...etc. This negatively affects their communication with others. In addition, verbal communication is a form of communication. Hence, procedures should be made to define and reveal the level of communication among those students.

The problem of the current study can be identified through posing the following questions:

1. What is the level of verbal communication among students with Down syndrome from the perspective of teachers?
2. Are there any statistically significant differences at the level of ( $\alpha \leq 0.05$ ) among the means of students with Down syndrome' scores on the verbal communication scale due to educational stage (primary or prep) from the perspective of teachers?

### 1.3 Significance of the Study

The theoretical significance of the study is derived from the importance of its topic, i.e. verbal communication skills, because they contribute to enhancing language competence as the child goes further in the early stages of education, if the indicative, receptive and expressive languages developed. While acquiring them, the child established the appropriate language competence to master spoken or written language or other aspects. Therefore, the current study aims to identify the level of verbal communication skills among intellectually disabled children with Down syndrome; making recommendations to persons in charge of the program for intellectually disabled children in Najran; and making a theoretical framework and literature that may contribute to the knowledge of verbal communication's concept among this class.

Its applied significance is manifested in designing the scale of verbal communication among the children with Down syndrome and testing its validity and reliability. Consequently, workers of intellectual retardation can use this scale to measure their level of verbal communication to design the educational programs. It can also be used by the authors among many other scales on these children.

### 1.4 Limitations

It has the following limits:

- The study was limited to a sample of male students with intellectual retardation of Down syndrome, aged (8-15). They were enrolled in the programs of inclusion for the intellectually disabled in the primary and prep stag in Najran, KSA for the academic year (2016/2017).
- Tool of the study and accuracy of calculating the significance of validity and reliability

### 1.5 Conceptions

*Down Syndrome:* American Association on Mental Retardation (AAMR) defines as a disability of extrinsic deficit of intellectual functions and adjustment behavior as appears in : Conceptual, social and practical skills that are manifested before the age of 18 (Hunt& Marshal, 2002). It is procedurally defined as students enrolled in special classes in public schools of the programs of inclusion for the intellectually disabled in Najran. They are aged (8-15).

*Verbal communication:* is the interaction among individuals by sending and receiving information, ideas, feelings, experiences and attitudes using verbal or written means to transmit a message from the sender to the receiver (Shoqer, 2002). It is procedurally defined as the exchange of spoken language among students with Down syndrome with themselves or their teachers to achieve the largest quantity of comprehension motivated by vocabularies among the parties. It is measured with the degree obtained on verbal communication scale designed by the author.

## 2. Method and Procedures

### 2.1 Sampling:

The sample of the study comprised the students with Down syndrome included at ordinary schools of Najran educational directorate for the scholastic year 1437/1438A.H. It comprised (30) participants; (16) of the primary stage and (14) of the prep. Their IQ rated (55- 70) and they aged (8 -15).

## 2.2 Tool of the Study:

The scale of verbal communication skills

To achieve the study's objectives, the author designed the scale of verbal communication depending on a set of related studies (Mahran, 2006; Hlebia, 2008; Elshehy, 2009; Elthobety, 2011; Elqahtany, 2011; Samara, 2013; Elkhamesy, 2016). It included, in its first draft (52) paragraphs distributed to five domains (naming, expressiveness, identification and understanding, imitation and attention).

1. *Validity of the scale:* (12) evaluators reviewed the scale to verify the validity of its content. They approved the paragraphs, rated (83 %). Hence, the final draft of the scale consisted of (45) paragraphs.
2. *Reliability:* Test-re-test method was conducted. The tool was applied to a pilot sample of (15) students with two-weeks interval between the first test and the second one, rating a value of (0.88) on Pearson Correlation coefficient between the two-tests. In addition, Cronbach's Alpha was applied to identify internal reliability coefficients, rating (0.90). Reliability coefficients' values were also obtained from the scale's domains (as shown in table 1)

Table (1): Reliability Coefficient and Cronbach's alpha of the scale's domains

No.	Domain	Reliability Coefficient and Pearson Correlation Coefficient	Internal reliability "Cronbach's alpha"
1	Naming	0.85	0.87
2	Expressiveness	0.90	0.87
3	Identification & Understanding	0.80	0.92
4	Imitation	0.81	0.83
5	Attention	0.90	0.86

Scale's correction

To analyze the study's results, the student's score for each skill estimated on four-point Likert Scale to obtain the following degrees:

- Always: the behavior is manifested in a continuous and organized manner, (Good/Targeted) (3) points.
- Sometimes: the behavior is often manifested, (Acceptable) (2) points.
- Rarely: the behavior is manifested in an unorganized manner, (Not acceptable) (1) point.
- Not applicable: the skill is not manifested, (zero) point.

## 3. Results of the Study

Discussing the results of the first question: *What is the level of verbal communication among students with Down syndrome from the perspective of teachers?*

To answer this question, the arithmetic means and standard deviations of verbal communication's level among students with Down syndrome from the perspective of teachers were calculated as shown in table (2).

Table (2) Arithmetic means and standard deviations of verbal communication level among students with Down syndrome from the perspective of teachers in descending order according to the arithmetic means

Rank	Domain	Arithmetic mean	Standard deviation	Level
1	Naming	2.07	0.28	Acceptable
2	Imitation	2.04	0.31	Acceptable
3	Identification & Understanding	1.98	0.34	Acceptable
4	Expressiveness	1.86	0.36	Acceptable
5	Attention	1.75	0.42	Acceptable
Total mark		1.94	0.23	Acceptable

Table (2) illustrates that the arithmetic means of verbal communication among the students with Down syndrome from the perspective of teachers rated (1.75- 2.07) and a standard deviation of (0.28-0.42). Naming was ranked first, with an arithmetic mean of (2.07) and a standard deviation of (0.28) and (acceptable). Imitation was ranked second, with an arithmetic mean of (2.04) and a standard deviation of (0.31) and (acceptable). Identification and understanding was ranked third with an arithmetic mean of (1.98) and a standard deviation of (0.34) and (acceptable). Expressiveness was ranked fourth with an arithmetic mean of (1.86) and a standard deviation of (0.36) and (prep). Attention was ranked last with an arithmetic mean of (1.75) and a standard deviation of (0.42) and (acceptable). In total, the arithmetic mean of communication skills was (1.94) and the standard deviation was (0.23) and (prep) degree.

Discussing the results of the second question: Are there any statistically significant differences at the level of ( $\alpha \leq 0.05$ ) among the means of students with Down syndrome' scores on the verbal communication scale due to educational stage (primary or prep) from the perspective of teachers? To answer this question, the arithmetic means and deviations of the participants' performance were estimated on verbal communication scale according to "educational stage" variable. To illustrate the statistical significances among these means, T-test

was conducted (as shown in table 3).

Table (3): Arithmetic means, standard deviations and "T" test of the participants' performance according to the educational stage on verbal communication scale

Skills	Educational stage	N.	Arithmetic mean	Standard deviation	"T" value	Freedom degrees	Statistical significance
Naming	Primary	16	1.93	.245	-2.978	28	.006
	Prep	14	2.20	.252			
Expressiveness	Primary	16	1.68	.382	-3.133	28	.004
	Prep	14	2.04	.199			
Identification & Understanding	Primary	16	1.79	.275	-3.642	28	.001
	Prep	14	2.17	.301			
Imitation	Primary	16	1.83	.272	-4.942	28	.000
	Prep	14	2.25	.170			
Attention	Primary	16	1.46	.293	-5.243	28	.000
	Prep	14	2.04	.309			
Total	Primary	16	1.74	.151	-8.132	28	.000
	Prep	14	2.14	.090			

Table (3) illustrates that there were statistically significant differences at the level of ( $\alpha 0.05$ ) to be attributed to the educational stage on verbal communication skills, in favor of the prep stage. They all were less than (0.05).

#### 4. Discussion

The current study aimed to identify the level of verbal communication among students with Down syndrome enrolled at the program of intellectual disability of inclusion program of Najran educational directorate.

I. Results indicated that the means of students' performance did not reach the target as it, as well as all domains, rated "acceptable". This may be attributed to a conclusion that the majority of children with intellectual disabilities experience communication difficulties (Jane, 2008). They face problems in naming of, for example, (geometric shapes, and function of the various things, colors and coins). This agrees with (Vicari et al., 2004) that concerning the errors of articles and nouns. It also agrees with (Elsaby, 2004) on forming the concepts of numbers, colors and time. It could also be contributed to a conclusion that the majority of children with Down syndrome experience cognitive problems that strongly affect language and speech (Pieterse et al., 2005). The students' weakness of pronouncing letters, words and sentences correctly and verbally expressing their needs and feelings agree with (Elqareouty et al, 2001; Kiarie, 2008) in terms of weakness of their vocabularies and using them to express their own self and failure to communicate verbally with others. They also have problems of deletion, substitution, articulation and words (Laws & Gunn, 2002).

This agrees with (Abbeduto, et al., 1995. Kahn & James, 1996; Facon, et al., 1998) that students with Down syndrome have deficit of linguistic skills, whether receptive or expressive. This is manifested in the way of speaking, inconsistency of vocabulary and misinterpretation. Difficulties of identification and understanding the directions, antonyms, items' description and weight, similarities and differences of photos also play a part. This agrees with (Jaafar, 2001) on describing certain concepts and the relative concepts; with (Ysseldyke & Alogozzine, 1990) on the quality of vocabularies; and with (Iverson et al., 2003) on using more than one vocabulary in speech. There are results that indicate the difficulty of imitating sounds, vocabularies and sentences, reincarnation and imitation. They agree with (Eadie et al., 2002) on the clear weakness of imitating sentences and with (Sokolov, 2000) on the clear difference of the nature of imitation, recalling and storing words.

There are also problems of attention and concentration. Results reported that they have problems and their attention is easily distracted. They agree with (Kherbash, 2004) indicating that those with Down syndrome have difficulties of attention, concentration, distinguishing concrete items and short- term memory.

II. Results indicated that there is an impact of "age" variable on the performance of the different domains of the scale; in favor the older groups because of their adulthood. The result is consistent with (Kherbash, 2004; Coppini & Gatt, 2015; Lacombe & Brun, 2008; Müller, 2007; Rondal & Seron, 2003; Céleste & Lauras, 2000) reporting that the rate of linguistic development is strongly related to age; the older children with Down syndrome are, the more their communicative abilities become and the clearer their speech becomes.

This can also be attributed to the effectiveness of inclusion in improving the communication of students with Down syndrome by developing their internal, receptive and expressive languages. This agrees with (Elkhashramy, 2004) concerning the effective impact of inclusion in ordinary schools on improving the level of

social, linguistic and self- concept skills; and with (Freeman& Alkin, 2000) on the effectiveness of the learning environment in improving the level of social behavior.

### Recommendations

The following recommendations have been made:

1. Paying more attention to the field of verbal communication for intellectually disabled with different levels of intelligence.
2. Attracting the attention of those who are interested in educating and taking care of those with Down syndrome to utilize the scale of verbal communication.
3. Holding training courses for those working in the inclusion program of the intellectually disabled on verbal communication.
4. Guiding those in charge of intellectual disability programs to include the individual educational plans of those with Down syndrome with the objectives of verbal communication development.

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