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THE ROLE OF THE TYPE OF WORKSHOP "*SOCIAL SKILLS OR CREATIVITY AND READING*"

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Abstract

People with Down syndrome show a similar development of language and emotional intelligence (EI) than people who do not. However, this development can occur more slowly and sometimes not spontaneously. That is why dissimilar associations have workshops focused on improving social skills and reading and creativity in order to facilitate the acquisition of them. The aim of the present study is to analyze the role of the type of workshop "social skills or reading and creativity" in the relationship between emotional intelligence and anxiety at the level of lexicon in people with Down syndrome. To do this, a sample of 15 people was analyzed, of which 9 attended the social skills workshop and 6 attended the reading and creativity workshop. The results showed that the most appropriate activity to develop lexicon when the levels of emotional intelligence are high is the social skills workshop. They also seem to indicate that the reading and creativity workshop is more suitable for the level of lexicon when anxiety levels are high and, it has a direct effect on lexicon.

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1. Introduction

Down syndrome is defined as a genetic disorder caused by the presence of an extra chromosome in pair 21, which can cause difficulties in various areas of development (Burns & Gun, 1995; Egozcue, Guitart, & Vidal, 1997). That is why early socio-educational attention is crucial (Aranda, 2008; Flórez, 2005; Galeote et al., 2006). From the educational field, different strategies and resources are used that allow people to acquire all the necessary skills in an adequate way, although normalization and integration must begin in the family environment (Ruiz Rodríguez, 2008). As indicated by Ruiz Rodríguez (2008, p. 6), the school is the institutional educational agent par excellence, in charge of imparting basic knowledge to all children and preparing them to be full citizens in their adult stage. Also, another important area focused on the integral development of people with Down syndrome, are the associations. That is, entities that provide educational, social and attention to people with disabilities. In addition, the associations do an important job, since there are hardly any materials adapted to the needs and interests and thanks to the preparation of these they can provide an adequate intervention to the characteristics of all people (Vived & Molina, 2012). Specifically, this study is carried out within the framework of the Down Association that offers comprehensive care in the global development of people with this syndrome. One of the association's objectives is to provide both educational and social intervention, through the completion of various workshops to work on the different skills and abilities useful for personal, social and professional development. Therefore, the aim is to intervene to improve the quality of life of people who have a disability. In this sense, one of the most relevant aspects for their personal, social and professional development is the language and that is why any activity whose goal is to improve it should be encouraged. In addition, the magnitude of the group of people with Down syndrome should be taken into account, since according to the State Database of Disabled Persons (2012) in Spain, for instance, there are three million people registered with this disorder. Bearing this in mind, the aim of this study is to analyze the benefits of the proposed activities to encourage the acquisition of vocabulary through workshops that promote different skills. More specifically, the relationship between EI and anxiety, and the lexicon by the type of workshop is analyzed.

1.1. Language Development in Down Syndrome

Language is a key issue for the development of children, since it is a tool that allows them to control their social and emotional world (Bruner, 1988; Bruner & Linaza 1984). Speech allows them to make requests, share experiences, understand events and express themselves. Regarding the development of language in people with Down syndrome they suffer a delay in their acquisition with respect to the norm (Buckley & Perera, 2005). However, the communication skills they develop are of great value, because they use a variety of gestures to solve the possible difficulties they may have in expressing themselves and being understood. According to Arregi (1998) there are some factors that can directly influence the acquisition of oral language. First of all, it should be taken into account that almost all people have a hearing impairment, due to the frequent otitis they suffer as a result of respiratory infections. Another influential aspect is the problems in short-term auditory memory, which is responsible for the processing of oral language and is a potent emotional trigger. Finally, motor delay is another aspect that interferes with the

development of oral language, since they have difficulties in correctly performing all the bucco-phonatory praxis necessities for articulation. Communication begins in the first interactions that the father or mother performs with the child. Adults interpret the gestures, looks and smiles of the child to meet their needs and desires. Hurtado Murillo (1995) in his book explained that children with Down syndrome show eye contact around two months and reaches the highest levels between 6 and 7 months. During the 6 to 10 months, reduplications of syllables (e.g, tatata) are produced solely for the pleasure of listening and attracting attention to the adults around them. Thus, Hurtado Murillo (1995) after a review of several studies shows that language appears in a similar way than in children with normal development, although they observed that children with Down syndrome emit fewer vocalizations during the first three months of life. They also showed problems in initiating and maintaining joint attention with adults, as they have difficulty maintaining attention to an object. The imitation of gestures begins after 18 months, using first of all the gestures of greeting and pointing, from this moment on they will learn more gestures to accompany the oral language. On the other hand, it must be taken into account that the learning of the symbolic relation that bases the use of linguistic signs is fundamental for the acquisition of language. Before learning the word, the child must understand this symbolic relationship According to Bates, Camaioni, and Volterra (1975) children with Down syndrome show deficits in this symbolization, since they do not use gesture or onomatopoeic productions, but use the adult as the instrument to change reality according to their interests. Arregi (1998) explained that during the first year although the evolution of preverbal language is similar to that of children with normal development, this does not mean that they are effective communicators because they show less initiative in interactions with adults, they keep less eye contact and have problems to keep the look on the same object as the adult. All these aspects have a negative influence on the development of oral language. Therefore, children with Down syndrome go through the same evolutionary milestones for language acquisition as norm-typical children, although later according to the contributions of Hurtado Murillo (1995), so the first words in children with Down syndrome appear on the 19 or 24 months. The terms are the same as in the rest of the children, that is, they refer to people, objects and activities of daily life. As for the first combinations of meaningful words occur between 31 to 40 months, when they have an expressive vocabulary of about 50 words, unlike children with normal evolution that develop over 19 months. Regarding the first sentences with one or two elements appear about 3 and 4 years and complete sentences do not develop until 5 or 7 years. In the development from the year until the two is a slow acquisition of the lexicon, from 2 years the process is accelerated, however in children with Down syndrome this slow process is extended to 4 years. In addition, the use of verbs also appears more slowly. Taking into account all these evolutionary aspects, children with Down syndrome have characteristics in each language component, these are: (1) Lexical-semantic component: according to Arregi (1998) mental age is an important variable in the acquisition of vocabulary in these children. The causes for which the child has a deficit at this level are due to having problems in understanding the relationship between objects, people, situations and events and difficulties in retaining these relationships. Arregi (1998) indicates that these aspects make people with this disorder have a reduced vocabulary, have difficulty in naming categories and present difficulties in the use of abstract and spatiotemporal words. They also define the objects only by the use they give them, have a literal understanding of the concepts, present limitations in the use of synonyms and antonyms and use less frequently the verbs of state and action. Rondal (2007) suggests that

the lexicon, being related to mental age, slows down in people with Down syndrome although its development is similar; (2) Morpho-syntactic component: according to Rondal (1994) children with Down syndrome acquire the use of pronouns, verbs, adverbs and adjectives with delay and use them less frequently than children with normal development. Also, the syntactic structures they use are simpler, since they do not use complex pronouns or verb tenses, that is, they have telegraphic speech. In the study carried out by Brown (1973), it was observed through the measurement of the average length of sentences that children with Down syndrome produce at four years with 1 or 2 phonemes while this is done by children with normal development between 23 and 30 months; (3) Pragmatic component: as indicated Rondal (1994), children with Down syndrome use appropriate gestures to support expression. However, they present echolalia, stereotyped responses and self-instructions aloud. They usually have difficulties to respond, that is, they need a longer latency time than the rest. Although all these characteristics are very conditioned by the linguistic environment that surrounds the person, the interactions between equals and the environments in which it is expressed; (4) Phonological component: according to Arregi (1998) it develops between two and seven years, during this process they acquire the correct articulation of the words. In children with Down syndrome, the order of appearance is the same as that of people with normal development, but they may be altered, and some phonemes may not even be produced. In addition, the pronunciation of the phonemes is slower and more difficult than the rest of the children. In this sense, some studies indicate that although slower the phonological development is similar, producing first the implantation of the vowels and semivowels, later the nasal consonants being the fricatives which include greater complexity in terms of their articulation. That is why they take longer to get articulate the fricative consonants and in some cases do not manage to dominate those (Rondal, 2007); (5) Phonetic component: due to the physiognomy and anatomy of people with Down syndrome, in some cases the production of speech is complex. That is why, in some cases, speech is not intelligible in its entirety (Miller, 1992; Miller & Leddy, 1999); (6) Language comprehension: people with Down syndrome have difficulties to comprehend in an abstract and decontextualized way the verbal messages, that is to say the language used in its passive form, subordinate sentences or excessively long or complex sentences (e.g., negation or double denial). In this sense, children who present a normal development may also have difficulties in understanding these forms of language expression, however the difference could refer more to the ability to request that they indicate or express in a more simplified form for their total understanding while people with Down syndrome may not show signs of the need to formulate the expression in another way to understand the information according to Santos Pérez and Bajo Santos (2011). Miller (1992) in several studies showed that most children with Down syndrome understand more than they can express, however we must differentiate between linguistic understanding and understanding in a given situation, since the use of a specific context helps to compensate for what they can lose through linguistic understanding, in which they have difficulties. On the other hand, taking into account the development of language in the adolescent and adult stage, there is not so much information, but the study by Chapman, Schwartz and Bird (1991) showed that they are progressing continuously and slowly in what concerns the improvement of the morphosyntax, the length of the sentence grows and they are able to tell stories or events and have a conversation. Over time, they continue to learn new vocabulary on a daily basis, acquiring a better command than syntax. Most of adolescents and adults according to Buckley and Perera (2005) can maintain

certain language and speech delays, that is, their verbal abilities are more affected than their non-verbal abilities, although there are individual differences and this could be due not so much to its capacity for development but to the facilities of the context so that it develops in the best possible way. Therefore, people with Down syndrome are able to communicate effectively, since they have a great communicative intention, but use key phrases and wild words adapted to the context in which they operate. However, following with the contributions of Buckley and Perera (2005), they may present problems at the beginning of a speech, due to their limitations and fears of not being understood. Also, they could present difficulties in the articulation of long words and phrases, this together with the anatomy causes them problems in the speech intelligibility. On the other hand, the learning of reading and writing will be quite limited due to its problems of vocabulary and grammar, however numerous studies affirm that people with Down Syndrome learn visually and therefore benefit from these approaches to reading and writing. In this sense, Vived and Molina (2012) developed during 2009 and 2010 a program to apply the methodology of easy reading in groups with some disability, this methodology has the purpose of adapting the texts to the levels of understanding of the people to whom they are directed.

1.2. Emotional Intelligence and Down Syndrome

Ruiz Rodríguez (2008) indicates that people with Down syndrome have an emotional life as rich as others, since they live their affective experiences with equal or greater intensity, although both communicative and cognitive difficulties can influence the capacity for rationalization, regulation and expression of emotions. According to Flórez and Ruiz (2003) there is a widespread belief that people with Down syndrome are "affectionate" and "sociable", these statements suggest that their ability to regulate their emotions are remarkable. However, without an intervention, their spontaneous socio-emotional level is low, so for the acquisition of emotional skills and self-control in any context this training is required. Ruiz Rodríguez (2004) explained the need that these people have for training through specific programs to acquire aspects of emotional intelligence that the rest of people acquire more without needing specific intervention. In these programs, socio-emotional skills are worked on, as in the knowledge and control of one's emotions and recognition of the emotions of others. The EI development is directly related to the acquisition of aspects related to language, since this is a necessary tool and guide to achieve these skills. Following the contributions of Salovey and Mayer (1990), language is one of the basic prerequisites for developing the abilities that integrate the four-dimensional model they proposed. First, there are the abilities of perception, assessment and expression of emotions, so that individuals are able to recognize and express their own emotions and those of others, it is essential to have a basic knowledge of oral and gestural language. It is also necessary to have a lexicon related to these aspects and a level of discourse appropriate to the demands to be able to express oneself successfully. On the other hand, in the second dimension are the abilities of emotional facilitation of thought, following the contributions of Vygotsky (1962) language is a capacity that appears before thought, since the actions and thoughts depend on the linguistic capacity of the students. Therefore, it will be necessary to have a good level of both oral and gestural language. In the third dimension is the understanding of emotions, this skill is closely linked to the development of both oral and gestural language, as it is necessary for the rationalization and assimilation of aspects related to emotional intelligence. The last dimension of the skills model of Salovey and Mayer (1990) includes the

skills for emotional regulation, following the contributions of Vygotsky (1962), language is not only a tool to communicate, but also plays an important role in the processes of cognitive control and regulation of both behavior and emotions. It is important to approach emotional intelligence taking into account the linguistic level of the person, since a problem in this can cause limitations to express and understand the feelings and emotions, thus causing states of frustration, anxiety and stress.

2. Problem Statement

Dissimilar associations offer workshops focused on improving social skills and reading and creativity to also facilitate the acquisition of different skills. This study provides a small but interesting block of empirical evidence of the activities carried out in people with Down syndrome. The aim is to identify what type of workshop is appropriate in some situations but not in others (or all). People with Down syndrome with high levels of emotional intelligence who attend “social skills” workshops can improve their lexicon levels but not those who attend the “creativity and reading” workshop. The “reading and creativity” workshop influences directly the lexicon and it could be more suitable for the level of lexicon when anxiety levels are high.

3. Research Questions

Based on these arguments, we formulate the following hypotheses:

Hypothesis 1. People with higher levels of EI will have higher level of lexicon and lower levels of anxiety.

Hypothesis 2. People with lower levels of anxiety will have a higher level of lexicon.

Hypothesis 3. The averages in EI, anxiety and lexicon will be different depending on the sex.

Hypothesis 4. The participants of the reading and creativity workshop will have higher levels of lexicon and the participants of the social skills workshop will have higher levels of anxiety and EI.

Hypothesis 5. The relationship between EI and the lexical level will be moderated by the type of workshop controlling for sex and age.

Hypothesis 6. The relationship between anxiety and lexical level will be moderated by the type of workshop controlling for sex and age.

4. Purpose of the Study

The aim of the present study is to analyze the role of the type of workshop in the relationship between EI and anxiety at the level of lexicon in people with Down syndrome.

5. Research Methods

5.1. Participants

15 participants of which 9 attend the social skills workshop and 6 the reading and creativity workshop, with ages ranging from 18 years to 33 years. The average age of the entire set of subjects in the sample is about 24.07 years (SD = 4.35). Of the total study sample, nine of the participants are women,

(60%) and six are men (40%). The workshops used in this study are available on the website of ASOCIACIÓN DOWN ESPAÑA: <https://www.sindromedown.net/publicaciones/publicaciones-down-espana/>

Social Skills Workshop. The workshop consists of 25 teaching units available on the following website: https://www.sindromedown.net/wp-content/uploads/2014/09/106L_tallerde.pdf

It is also possible to download the student notebook from this website: https://www.sindromedown.net/wp-content/uploads/2014/09/136L_7.pdf

Reading and Creativity Workshop. Workshop information can be downloaded from the following link: <https://www.sindromedown.net/wp-content/uploads/2018/09/Taller-de-Poes%C3%ADa.-Gu%C3%ADa-did%C3%A1ctica.pdf>

5.2. Measures

Vocabulary or Level of the lexicon was measured by the standardized test PPVT-III - Peabody: Test of Vocabulary in Images (Dunn, Dunn & Arribas Aguila, 2010).

Emotional intelligence was obtained through the PERCEXPVAL-V.0 test (Mestre, Guil, Martínez-Cabañas, Larrán, & González, 2011).

Anxiety was measured using 21 items of Beck Anxiety Inventory (BAI) (Beck & Steer, 2011).

6. Findings

6.1. Hypothesis Testing

The correlation analyzes performed for this hypothesis are shown in Table 1, in which it is observed that the dimension of the lexicon correlates significantly and positively with the emotional intelligence dimension ($r = .89$, $p < .01$), that is to say, greater lexicon greater emotional intelligence. In addition, emotional intelligence correlates significantly and negatively with the dimension of anxiety ($r = -.80$ $p < .01$), which means that the greater the emotional intelligence, the less anxiety. Therefore, H1 is confirmed. Hypothesis 2 stated that people with lower levels of anxiety would have higher lexical levels. The results of the correlation analysis show that the lexical dimension correlates significantly and negatively with anxiety ($r = -.77$ $p < .01$), that is, the greater the lexicality, the less anxiety the participants showed in the study.

Table 01. Means, Standard Deviations and bivariate correlations

	M	SD	1	2	3	4	5	6
Lexicon	66,27	20,62	1					
Anxiety	8,47	1,46	-,77**	1				
EI	10,60	2,10	,89**	-,80**	1			
Sex	,60	,51	-,69**	-,37	-,63*	1		
Age	24,07	4,35	,13	-,28	,24	,11	1	
Work Shop	,40	,51	-,46	,50	-,44	,11	,18	1

Note: * $p < .05$; ** $p < .01$. Social skills workshop "0"; Reading and creativity workshop "1". Men "0", Women "1"

The hypothesis 3 proposed that there would be differences in the variables emotional intelligence, anxiety and lexicon depending on sex. The results showed that the emotional intelligence mean is higher in men ($M = 12.17$; $DT = 2.48$) than in women ($M = 9.56$; $SD = .88$). Likewise, at the lexicon level, higher scores were also obtained in men ($M = 83.17$, $SD = 24.87$) than in women ($M = 55$, $SD = .00$). However, the average anxiety was higher in women ($M = 8.89$, $SD = .92$) than in men ($M = 7.83$, $SD = 1.94$). The results of the t test show significant differences according to gender for the emotional intelligence variable ($t = 2.47$, $gl = 5.85$, $p < .05$) and the lexicon ($t = 2.77$, $gl = 5$, $p < .05$), that is, men have higher levels of emotional intelligence, and vocabulary than women in a significant way. Although women scored higher in anxiety, this difference did not reach the level of significance required ($t = -1.42$, $gl = 13$, $p = .18$). Therefore, H3 is partially accepted. Hypothesis 4 suggested that the participants of the reading and creativity workshop would have higher levels of lexicon and the participants of the social skills workshop would have lower levels of anxiety and greater levels of emotional intelligence. The results of the comparison of means analysis showed that the average of emotional intelligence of the participants in the social skills workshop "0" ($M = 11.33$, $SD = 2.34$) was greater than the emotional intelligence of the participants who attended the reading and creativity workshop "1" ($M = 9.50$, $SD = 1.04$). However, this difference, although close, did not reach the level of significance required ($t = 2.06$, $gl = 11.82$, $p < .06$). The average anxiety of the participants who participated in the social skills workshop "0" ($M = 7.89$, $SD = 1.45$) was lower than the anxiety of the participants who attended the reading and creativity workshop "1" ($M = 9.33$, $DT = 1.03$). However, this difference did not reach the level of significance required ($t = -2.09$, $gl = 13$, $p < .056$). In addition, the lexical mean of the participants who attended the social skills workshop "0" ($M = 73.78$, $SD = 24.19$) was greater than the lexicon of the participants who attended the reading and creativity workshop "1" ($M = 55$, $SD = .01$), in addition the difference in means was significant ($t = 2.33$, $df = 8$, $p < .05$). Therefore, H4 is partially confirmed. The results of the regression analyze performed show, first of all, how it can be observed in table 2, that emotional intelligence had a positive influence on the lexicon score ($B=8.23$, $p < .01$). There is also a direct positive relationship between the reading and creativity workshop "1" and the level of lexicon, so the interventions through this workshop could increase the level of lexicon, nevertheless this effect is not significant ($B = 75.15$, $p < .10$). In addition, the relationship between emotional intelligence and the lexicon score is moderated by the type of workshop. As shown in Figure 1, the relationship between emotional intelligence and lexical level is positive in participants attending the social skills workshop "0" ($B = -9.47$, $p < .05$). Therefore, it can be indicated that the relationship between EI and lexical level is positive and significant in the case of the social skills workshop. However, this relationship between emotional intelligence and lexical level is almost nil for the participants in the reading and creativity workshop. In addition, these results seem to indicate that the reading and creativity workshop influences directly the lexicon but social skills workshop influences the level of lexicon jointly the levels of EI. For these reason future studies should be analyze the mediator effect of EI on lexicon achieved through the social skills workshop, or indirect effect of the workshop on lexicon through the increase of EI. Therefore, H5 is accepted. Table 3 shows the results of the regression analysis for the lexicon depending on the anxiety and the workshop. It can be seen (figure 2) that the relationship between anxiety and lexicon is negative in the social skills workshop "0". That is, the higher the anxiety, the lower the lexical score. However, the anxiety does not seem to affect the level of lexicon in the reading and creativity

workshop "1", which seems to indicate that it is a workshop indicated in people who show high levels of anxiety so that their levels of lexicon are not seen affected due to anxiety. However, the analysis shows that the level of significance does not reach the required level and therefore the results cannot be taken into account (B = 9.17, ns). Therefore, H6 is rejected.

Table 02. Results of the regression analysis for the "peabody" vocabulary – lexicon test depending on EI

Variable	B	R2	ΔR^2
Sex (Control Variable)	-6.13		
Age (Control Variable)	-.01		
Emotional Intelligence (EI)	9.47**		
Workshop (WS)	88.55†		
Interaction (IE X WS)	-9.47†	.89**	.05†

Note: B are non-standardized regression coefficients; †<.10; * p <.05; ** p <.01. Social skills workshop "0"; Reading and creativity workshop "1". Men "0", Women "1"

Table 03. Results of the regression analysis for the "peabody" vocabulary – lexicon test depending on anxiety

Variable	B	R2	ΔR^2
Sex (Control Variable)	-15,90		
Age (Control Variable)	1.01		
Anxiety (ANS)	-8.66*		
Workshop (WS)	-91.61		
Interaction (ANS X WS)	9.17	.84**	.03

Note: B are non-standardized regression coefficients; †<.10; * p <.05; ** p <.01. Social skills workshop "0"; Reading and creativity workshop "1". Men "0", Women "1"

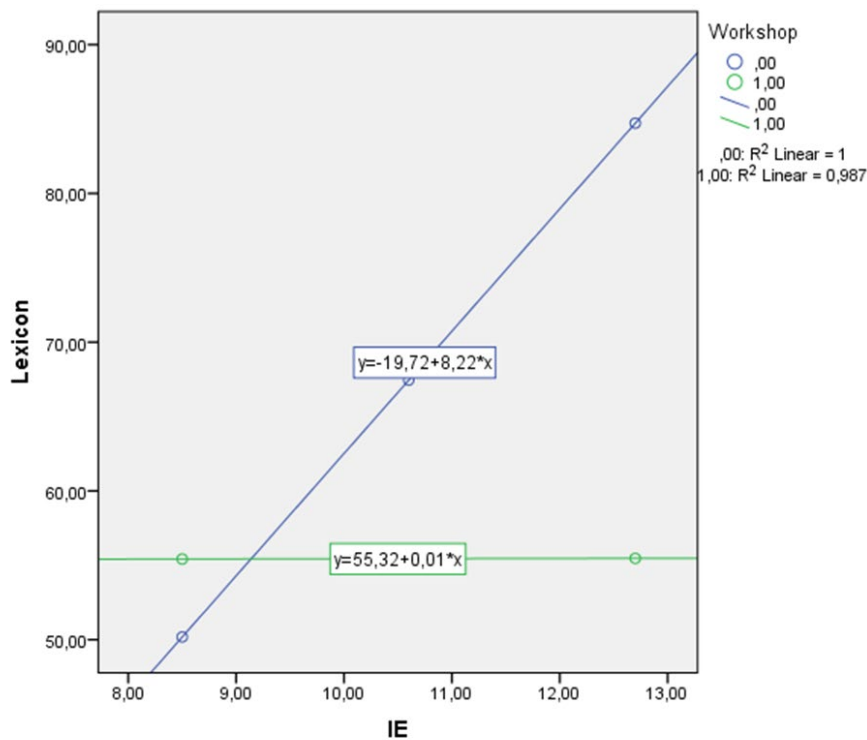


Figure 01. Regression analysis for the "peabody" vocabulary – lexicon test depending on EI
 Note. Social skills workshop "0"; Reading and creativity workshop "1"

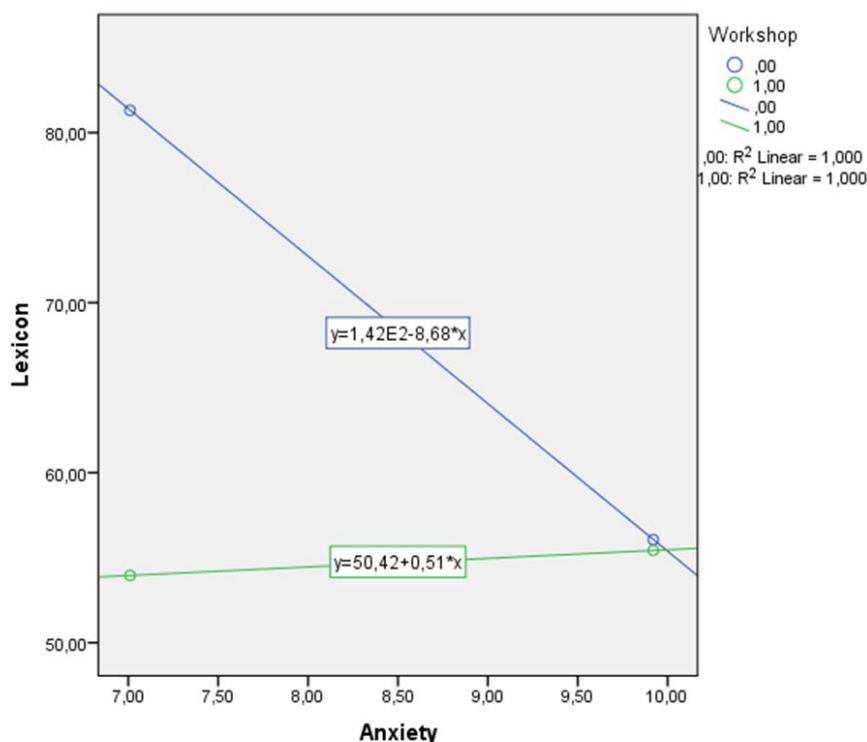


Figure 02. Regression analysis for the "peabody" vocabulary – lexicon test depending on anxiety]
 Note. Social skills workshop "0"; Reading and creativity workshop "1"

7. Conclusion

Taking all these results into account, it can be concluded by saying that the most positive workshop to develop all the aptitudes, in the people with Down syndrome, is the workshop of social skills, it seems to indicate that the activities carried out by the people who participate in it obtain higher scores on all the skills that have been measured by the administered tests. However, although those attending the reading and creativity workshop scored less in the administered tests, it can be pointed out that the activities carried out in this workshop do not improve or worsen the level in the skills measured. It is also important to add that the reading and creativity workshop is positive for people who have higher levels of anxiety. Therefore, a relevant result regarding the reading and creativity workshop found in this study is the direct positive relationship between the reading and creativity workshop "1" and the level of lexicon, so the interventions through this workshop increase in form significant the level of lexicon. Furthermore, the lower levels of anxiety in those users who participate in the literary creativity workshop could be due to the climate of this workshop that could allow the expression of internal or affective questions of the users, which could diminish their levels of anxiety. Therefore, these results may give guidelines for a more personalized and beneficial intervention for people who attend to a workshop in order to improve their lexicon levels and thus provide the skills to achieve an integral development on a personal, social and professional level.

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