Research Paper:

The Relationship Between Receptive Language Development and Social Skills in 4-6 Years Old Children of Shahrebabak City, Iran

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Citation: Bakhshaei M, Zeinaddiny Meymand Z, Bakhshaei MH. The Relationship Between Receptive Language Development and Social Skills in 4-6 Years Old Children of Shahrebabak City, Iran. Avicenna J of Neuropsychophysiology. 2017; 4(2):37-44. http://dx.doi.org/10.32598/ajnpp.4.2.37

doi: http://dx.doi.org/10.32598/ajnpp.4.2.37

Funding: See Page 44

Article info:
Received: 20 October 2016
Accepted: 10 Febraruary 2017
Available Online: 01 May 2017

Keywords:
Social skills, Children, Preschool

ABSTRACT

Background: This study aimed to investigate the relationship between receptive language development and social skills in 4-6 years children of Shahrbabak City, Iran.

Materials and Methods: In this cross-sectional study, 46 (23 girls and 23 boys) children aged 6-4 years were recruited. The study inclusion criteria consisted of having normal intelligence and proper socioeconomic status of parents. Through single-stage cluster sampling method, two daycare kindergartens were chosen out of the preschools of Shahrbabak (according to Dr Human formula for sampling). We used language development and grading scale social skills test, with forms of teachers and parents. Exclusion criteria included low intelligence, hearing loss and uncooperative behavior. The Pearson correlation coefficient was used for analyzing the obtained data.

Results: The results showed a significant correlation between some of the components of language development (grammatical understanding, listening and syntax in the form of teachers and phonological analysis in the form of parents) and dimensions of social skills. Also significant difference was observed in correlation between some components of language development dimensions and social skills (phonological analysis in the form of parents and word differentiation in the form of teachers). Also parents as well as teachers believed that some components of the social skills were more in boys compared to girls.

Conclusion: Based on these results, not only receptive language development increases by social skills development, but also these skills were more in boys than girls at the age 4 to 6 years.

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1. Introduction

Language and social skills are two human characteristics that play an important role in his life. Language acquisition is one of the most important factors of growth and is totally depending on social environment. Meanwhile, expressive language is the key element of language development and plays an important role in the development of social skills and child's competence [1]. For the most part, expressive language is the efficient aspect of a language that refers to phrases and sentences used in a significant way. Generally, receptive language skills are usually much more advanced than expressive language skills in normally developing children [2].

During childhood and passing through growth stages, the child abilities are developed in different aspects such as listening skill, expressive language and speech along with social skills that could have important effect on the development of children's expressive language. Therefore, speech and language acquisition is one of the most important components of development and social interaction has fundamental role in this process [3]. Theoretical data also indicate a direct correlation between language development and social skills [4-7].

The importance of the recent study is the generalizability of the results of previous research (to increase external validity) in Shahrbabak society. Given the valuable role of social skills training in the physical, mental, and social health of people, especially children, we intend to investigate the other effective factors on the social skills such as ability of receptive, verbal language and gender. This study mainly aims to investigate the relationship between receptive language and social skills among school children aged 4 to 6 years old in Shahrbabak City.

2. Materials and Methods

In this study, two kindergartens were selected by single stage cluster sampling method. Of the total 750 children aged 4-6 years old present in Shahrbabak preschools, 46 children (23 girls and 23 boys), who met inclusion criteria, (parents' education, socioeconomic class, etc.) were selected and enrolled in the study.

The study tools were expressive language development and social skills grading scale of children test which contained both parents' and teachers' forms.

In the implementation phase, at first the information on selected samples (such as hearing and intelligence test) was extracted and studied by using their health and academic records. Based on this information and educators' advice, children with speech, hearing, intelligence and learning defects were identified and removed from the study. The data on the subjects' records, including name, sex, occupation and parents' education level were recorded. Two tests were used to assess language development and social skills. To investigate expressive language development, test for language development, the initial revised version (Test of Language Development-3: TOLD-3) was used [8].

The test contains 9 subtests which are designed to use for 4 years to 8 years and eleven months children. The reliability of this test is assessed by using internal consistency with Cronbach alpha coefficient as 0.89, and it is determined by using the test-retest method. Correlation coefficients for subtests in order mentioned above have been calculated 0.85 and 0.85. Also, its validity by using of content validity, criterion validity, and structure validity methods were examined that may point to 0.71 and 0.71 coefficients among them. Score specific criteria for each word are listed in manual book. Each correct answer receives 1 score, and each incorrect answer 0 score. The test is stopped after five consecutive failures [9].

Social skills rating system scale for preschool children was used for the social skills study. This scale is one of the most valid tools for the identification of social problems of preschool children. The scale has parents' and teachers' forms which investigates behaviors such as "social competence", "social skills" as well as "connecting to peers". Based on Truscott (1989) results, the Cronbach's α for measuring reliability of test of social skills was 0.91. Also, according to the results of research conducted for evaluating the validity of social skills in children, its validity is 0.89. Grading method of social skills rating scale is as follows: Each subscale in the manual table is shown with its own symbols. For obtaining its score, one must define the clause for the desired scale by using test key to achieve the score.

The highest score of each subscale shows weakness in that subscale. In contrast, the low score of each subscale represents strong children in that subscale. The score of social skills is obtained by adding all scores of these subtests.

At first TOLD-3 was administered individually to prepare a favorable environment and establish rapport

with the subjects. To examine dimensions of social skills in the form of teachers and parents, social skills rating scale made available for them. The experimenter provided adequate explanations on how to fill out the form and the purpose of each test, also objectives of this study. Four educators contributed in this study that their Mean (SD) teaching history were 7.08(4.84) years. Each educator commented on their children under training, also the number of children was not equal. It should be noted that the raw scores obtained from language development test have become aligned scores before data analysis. It was considered as the Social Skills Rating Scale raw score. In test of language development, the recorded raw scores of each child with the corresponding age equivalents with respect to the raw scores registered on tables of Test of Language Development, and then they were converted to rating percentages in addition to standard scores (which are in the normative tables). Finally, the obtained data were analyzed by Pearson correlation coefficient in SPSS Version 17.

In order to describe the studied variables, indicators of central tendency, dispersion and distribution of scores were used. In the statistical analysis stage due to the nature of measuring scale which is distance type, and also research hypotheses to analyze the data as needed, comparing correlation test for independent groups and Pearson correlation coefficient were used.

First hypothesis: According to the parents' viewpoint, there is a correlation between expressive language development and social skills of parents.

Second hypothesis: There is a correlation between expressive language developments with social skills according to the teachers' viewpoints.

Third hypothesis: There is a significant difference between the expressive language development and social skills of girls and boys according to the parents' viewpoint.

Fourth hypothesis: There is a significant difference between expressive language development and social skills of girls and boys according to the teachers' viewpoint.

3. Results

The results of Pearson correlation showed a negative and significant correlation between social skills of children with different dimensions of language development from parents' viewpoints, also between total score of social skills with phonological analysis (r=-0.32, P<0.01), and between lack of social skills with phonological analysis (r=-0.312, P<0.01). But there is not any significant correlation between "connecting with peers" and other dimensions of language development (Table 1).

There is a negative and significant correlation between the total scores of social skills with phonological analysis, and between lack of social competence with phonological analysis according to parents' viewpoints (P<0.01). However, there is no significant correlation between "connecting to peers" and other dimensions of language with phonological analysis, and between other dimensions of language with components of social skills according to parents' viewpoints.

Teachers' viewpoints on the relationship between social skills of children with various dimensions of language development showed negative and significant correlation between the total scores of the social skills of the child with grammatical understanding (r=-0.303, P<0.01). Also there is a negative and significant correlation between lack of social skills with grammatical understanding (r=-0.348, P<0.05) (Table 2).

There is a negative and significant correlation between social skills of children with listening according to teachers' viewpoints (r=-0.295, P<0.05). There is a negative and significant correlation between lack of social skills with listening based on teachers' viewpoints (r=-0.31, P<0.05). There is not any significant correlation between the total scores of children and lack of social skills with syntax in teachers' viewpoints respectively (r=-0.333, P<0.01) (r=-0.307, P<0.05). There is not any significant correlation between "connecting to peers" with syntax according to the teachers' viewpoints (r=-0.309, P<0.05). There is not any significant correlation between the rests of dimensions.

According to the teachers' viewpoints, there is a negative and significant correlation between the total scores of social skills with grammatical understanding (P<0.01), and lack of social competence with grammatical understanding (P<0.05). Also, according to the viewpoints of teachers, there is a negative and significant correlation between the total scores of social skills with listening, and lack of social competence with listening (P<0.05). Also, there is a negative and significant correlation between the total scores of social skills with syntax (P<0.05). According to teachers, there is not any significant correlation between other dimensions of language development with components of social skills.

Tables 3 and 4 show that after correlation conversion of girls' and boys' group into equivalent Fischer scores,

Table 1. The correlation matrix between variables (parents' viewpoints)

Components	Parents' Viewpoint			
	Total Score	Lack of Social Competence	Social Skills	Connecting With Peers
Pictorial lexicon	0.004	0.06	-0.015	-0.097
Relevant lexicon	-0.038	-0.021	-0.045	-0.09
Oral lexicon	0.098	0.029	0.123	0.162
Grammatical understanding	-0.08	-0.05	-0.005	-0.236
Sentence imitation	0.195	0.184	0.166	0.119
Grammatical complementarity	-0.273	-0.273	-0.276	-0.047
Differentiation word	-0.142	-0.152	-0.153	-0.049
Phonological analysis	0.32**	0.354**	-0.312**	-0.08
Word production	-0.033	-0.005	-0.085	-0.02
Spoken language	-0.037	-0.002	-0.041	-0.09
Listening	-0.059	-0.001	-0.047	-0.17
Organizing	0.168	0.155	0.145	0.05
Speaking	-0.245	-0.269	-0.232	-0.01
Semantics	0.006	0.059	-0.03	-0.06
Syntax	-0.186	-0.158	-0.176	-0.142

**P<0.01

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Table 2. Correlation matrix between variables (Teachers' viewpoints)

Components	Teachers' Viewpoint			
	Total Score	Lack of Social Competence	Social Skills	Connecting With Peers
Pictorial lexicon	-0.131	-0.12	-0.153	0.017
Relevant lexicon	0.037	-0.01	0.049	-0.013
Oral lexicon	0.133	0.173	0.067	0.141
Grammatical understanding	-0.355**	-0.303*	-0.348*	-0.259
Sentence imitation	-0.037	0.02	-0.042	-0.107
Grammatical complementarity	-0.119	-0.09	-0.059	-0.232
Differentiation word	-0.137	-0.177	-0.006	-0.294
Phonological analysis	-0.218	-0.226	-0.197	-0.132
Word production	-0.01	-0.095	0.073	-0.119
Spoken language	-0.223	-0.193	-0.215	-0.142
Listening	-0.295*	-0.269	-0.31*	-0.123
Organizing	-0.039	-0.03	-0.021	-0.092
Speaking	-0.154	-0.1	-0.108	-0.217
Semantics	-0.025	-0.03	-0.051	0.06
Syntax	-0.333**	-0.278	-0.307*	-0.309*

*P<0.05 **P<0.01

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Table 3. Correlation matrix between variables by phonological analysis (Parents' viewpoints)

Components	Variable	Girls	Boys	Fisher Test		Z	Sig. (P)
				Girls	Boys		
Parents	Total score	-0.011	-0.579**	0.01	0.662	-2.05	<0.05
	Lack of social competence	-0.241	-0.512**	0.245	0.57	-1.02	>0.05
	Social skills	0.08	-0.633**	0.01	0.75	-2.33	<0.05
	Connecting with peers	0.182	-0.297	0.187	0.31	-0.39	>0.05

**P<0.01

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Table 4. Correlation matrix between variables by phonological analysis (Teachers' viewpoints)

Components	Variable	Girls	Boys	Fisher Test		Z	Sig. (P)
				Girls	Boys		
Teachers	Total score	-0.312	-0.137	0.326	0.141	0.58	>0.05
	Lack of social competence	-0.292	-0.183	0.304	0.187	0.36	
	Social skills	-0.251	-0.129	0.261	0.131	0.41	
	Connecting with peers	-0.361	0.045	0.383	0.05	1.05	

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there are significant difference only in social skills and phonological analysis (z=2.05, P<0.01), and component of social skills with phonological analysis (z=2.33, P<0.01) among boys and girls in the correlation between phonological analysis and social skills and their dimensions.

There is significant difference between total scores of social skills with phonological analysis among girls and boys (P<0.01) according to the parents' viewpoint. Also, these skills are more in boys than girls. Furthermore, there is not any significant difference between other dimensions of language development and components of social skills.

Tables 5 and 6 show that after the conversion of correlation of group of girls and boys to equivalent Fisher scores, there is significant difference between "word differentiation" and social skills and their dimensions only in "connection with peers" (z=2.84, P<0.05) according to parents' and teachers' viewpoint, and correlation between "word differentiation" and "connecting to peers" in boys is more than that in girls according to teachers' viewpoint. However, there is not any significant difference between boys and girls in other dimensions.

There is a significant difference between "connecting with peers" and "word differentiation" (P<0.05) according to the teachers' viewpoint. Also, correlation between "word differentiation" and "connecting with

Table 5. Correlation matrix between variables with word differentiation (Parents' viewpoints)

Components	Variable	Girls	Boys	Fisher Test		Z	Sig. (P)
				Girls	Boys		
Parents	Total score	0.113	-0.475	0.116	0.517	-1.26	>0.05
	Lack of social competence	0.024	-0.447	0.025	0.485	-1.45	
	Social skills	-0.004	-0.351	0.005	0.365	-1.13	
	Connecting with peers	0.192	-0.365	0.198	0.383	-0.58	

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Table 6. Correlation matrix between variables with word differentiation (Teachers' viewpoints)

Variable	Girls	Boys	Fisher Test		Z	Sig. (P)
			Girls	Boys		
Total score	0.319	-0.574*	0.332	0.655	-1.01	>0.05
Lack of social competence	0.213	-0.544*	0.218	0.611	-1.23	>0.05
Social skills	0.496*	-0.523*	0.549	0.583	-0.1	>0.05
Connecting with peers	-0.03	-0.721*	0.005	0.908	-2.84	<0.05

*P<0.05

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peers" in boys is more than that in girls according to teachers' viewpoint. However, there are not any significant difference in any of the other dimensions among girls and boys. Findings of the third and fourth hypotheses are inconsistent with findings of Shahim (2012) who did not observe significant difference in her studies.

4. Discussion

According to the behavioral theories, what increases the range and expressive language development in preschool and first grade primary school children, besides family, are school environment, teachers, and classmates that provide the background of child learning and help the child to develop his/her speech and language by modeling and imitating the speech behavior of others. Children at this age gain a lot of information through listening, and at the same time learn speaking skills, reading, and writing as they grow quickly. Contrary to the cognitive theorists who emphasize on the existence of special cognitive talents for language development, they point to undeniable importance of the environment effect onto language learning, and recognize social communication as one of the language functionality.

Findings of this study show significant correlations between some of dimensions of language development with some of social skills components, and also there is a significant correlation between some components with the total scores of social skills in some cases. Therefore, it can be said that increase in the social development level will increase the language development level. This issue agrees with the proposed theories by cognitive theorists.

The results of studying language and social skills development subtests show correlation between listening, grammatical understanding, and syntax with social skills components according to teachers' viewpoints which can be explained by examining the aims of each subtest. Syntax is important, because improvements in this area translate into improvements in general communication abilities and better perceptions of individuals with disabilities [10, 11].

Expressive language -that is named as speaking in the used tool for this study- represents how to use and understand language. That is why sociolinguists consider the most importance of the understanding of the speaker from the situation which the interaction is occurred in it. Hence, the use of language is widely affected by the people that child interacts with and by the situation in which the interaction is taking place. Therefore, the child who gains higher score in the field of language development, will present more sensible performance. To justify these findings, pay attention to the social theory of Robertson and Vaster (1999) in language learning. According to this theory, there is a mutual relationship between the child and the environment. Hence, whenever the social interaction between children and parents is more dynamic, language development and social skills of children will be more.

The results of the study support the correlation between the dimensions of social competence, social skills, and "connecting to peers" with expressive language development which was significant in some cases. In this study, the social competence includes cognition skills that include repertory of data, processing skills, data acquisition, decision making ability, efficient and non-efficient beliefs, and documentation styles which are in correlation with grammatical understanding (teachers' form) including listening system. This is both as a background and necessary element for the social competence ability development, and also possessing correlation between the phonological analyses (parents' form) which is one of the organizing system measurement subtests. These results are consistent with the study results of McCabe PC, Meller PJ who examined the correlation between language with social

competence among normal and SLI children aged 4-6 years old [12]. These results also agree with Dickinson and Tabors (2001) reports that social interaction of children with their peers at home is in favor with spark and encourage them to speak in the social environment which is one factor of the formation and development of language skills [13].

There is a correlation between dimension of "connecting to peers" with social skills development scales that includes starting behaviors such as data acquisition from others with syntax subtest that refers to the structure of language (namely the discipline and organization among the words which determines the correlation between phonetic patterns and meaning with the form of sentences). This finding agrees with the Ziegler (1998) study claiming that the interaction of children at this age with other children (as an index of connecting to peers subtest) is one of the factors of the formation of skills that are important for language development of children [14].

There is a correlation between the social skills subtest (which is applied to the set of individual' ability for effective relationships with others) with grammatical understanding as well as listening and syntax (According to teachers' form). Furthermore, listening area includes encoding operation by which, abstract symbolic meanings are received. Also, there is a correlation between social skills subtest with phonological analysis (parents' viewpoint) i.e., in the organizing area. These cases represent how to apply and understand language. This is the reason that sociolinguists pay a lot of attention to speaker' understanding of interaction situation.

These findings are consistent with the results of Margaret Burchinal (cited in Akhavantafti and Mousavi, 2007) that recognize the attention to children, social interaction with them, speaking, and language communication with children from the beginning of birth are the factors of language skills development and preparation for school [15]. Also, the above findings agree with Brouner' theory and cognitive theorists who approved and believed that official training causes syntax, semiotics, and language performance development [16-18].

Some reasons including small study population, incoordination of children with the examiner, and also failure of the examiner could be responsible for the weak correlation and sometimes lack of correlation between language development and social skills. Furthermore, two reasons could be pointed about the viewpoint difference between teachers and parents: A) difference of teaching environment and home, B) different conclusions of teachers and parents about social skills.

In this study, teachers and parents valued the social skills of kindergarten boys more than kindergarten girls, because contrary to schools, girls and boys study next to each other in kindergartens of Iran, and their abilities are compared with each other. Also, it expresses certain expectations of teachers and parents from girls in the cultural environment of Iran.

5. Conclusion

By finding the significant correlation between some components of two variables, namely: expressive language development with social skills, and noticeable importance of preschool period in the development of the children, one could practically and theoretically emphasize on the improvement, facilitation, and empowerment of speech and social communication of these children through the educational decisions and language development planning in kindergarten period. Furthermore, one could perform the important issue of language and social preparation of these children. Also, parents and teachers of kindergarten children reported significant differences between boys and girls in expressive language development and social skills. This difference may indicate more social expectations from girls in the Iranian culture. Perhaps, this is due to more girls' isolation in Iran. Or this is due to the larger number of boys than girls. In general, the findings of this study supports a significant correlation between language developments with social skills. Therefore, increase in social development will be accompanied by increase in expressive language development.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles were considered in this article. The participants were informed about the purpose of the research and its implementation stages; They were also assured about the confidentiality of their information; Moreover, They were allowed to leave the study whenever they wish, and if desired, the results of the research would be available to them.

Funding

This paper was extracted from the MSc. thesis of Mina Bakhshaei in the Department of Education and Psychology, Islamic Azad University of Kerman, Iran.

Conflict of interest

All the authors declare that they have no conflict of interest.

Acknowledgements

Hereby, we appreciate the staff of Fereshtegan private preschool center.

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