

## RESEARCH ARTICLE

## EMERGENCE OF URDU SPATIAL PREPOSITIONS TO ASSESS SYNTACTICAL IMPAIRMENTS IN PAKISTANI CHILDREN

1. Consultant Speech Language Pathologist, Bilquis Memorial Hospital, Islamabad Pakistan
2. Professor, Department of Applied Psychology, Islamabad Model College for Girls (Postgraduate) F-7/2, Islamabad, Pakistan
3. Assistant Professor, School of Engineering & Applied Sciences, Isra University Islamabad
4. Consultant Speech Language Pathologist, National Institute of Rehabilitation Medicine, Islamabad.
5. Teaching Assistant, Pakistan Institute of Rehabilitation Sciences, ISRA University Islamabad Campus, Pakistan

## Correspondence

Faseeha Shafqat  
Consultant Speech Language Pathologist,  
Bilquis Memorial Hospital, Islamabad Pakistan  
E-mail: [faseeha.shafkat@gmail.com](mailto:faseeha.shafkat@gmail.com)

Received on: 23-01-2022

Revision on: 10-03-2022

Published on: 31-03-2022

**Citation:** Shafqat F, Khan NR, Khan N, Adeel H, Haroon R  
Emergence of urdu spatial prepositions to assess  
syntactical impairments in Pakistani children T Rehabil. J.  
2021;06(01):303-308  
doi: <https://doi.org/10.52567/trj.v6i01.127>

**Faseeha Shafqat<sup>1</sup>:** Conception, writing; revised and accountable for all aspects  
**Nasreen Rafiq Khan<sup>2</sup>:** Revised and accountable for all aspects  
**Hannan Adeel<sup>3</sup>:** Data analysis, Interpretation, and accountable for all aspects  
**Nasir Khan<sup>4</sup>:** Analysis & interpretation of data, revised and accountable for all aspects  
**Ramsha Haroon<sup>5</sup>:** Revised and accountable for all aspects

## ABSTRACT

**Background:** Urdu syntax is diverse in nature and does not relate to parameters established for English syntax in many ways. Speech-Language Pathologists' (SLPs) assessments based on Ages of Acquisition (AoA) of spatial prepositions cannot be standardized for Pakistani Urdu speaking children until ages of emergence of these prepositions are determined in this population. **Objective:** to explore ages of acquisition of spatial prepositions in young Pakistani Urdu speaking children. **Methodology:** This cross-sectional survey explored AoA of spatial prepositions in a sample of N=370 (boys= 128, girls=242) young Urdu speaking children aged 24-48 months residing in Islamabad. Urdu prepositions checklist was given to the parents (mothers=242, fathers=32), teachers (n=63) and significant others (n=33), to fill in accordance with spontaneous speech of their children. Data were descriptively analyzed using SPSS version 21. **Results:** Urdu spatial prepositions اوپر /u:pər/ (Up/above/on) and نیچے /ni:tʃæ/ (down/below/under) were acquired in 24-26 months of age and by 42-48 months these were mastered by 89.3% and 88.6% of within age group participants respectively. Spatial prepositions acquired in 30-35 months were آگے /a:geɪ/ (in front of), پیچھے /pi:tʃæ/ (behind) and ساتھ /sa:θ/ (beside) with percentages 67.3%, 56.4% and 72.7% respectively. Preposition درمیان /d̪rmiʃn/ (between) was acquired in 42-48 months with response percentage 52.8%. AoA of preposition میں /bi:tʃ meɪ/ (in the middle of) can be considered as later than 48 months because even in highest age limit group i.e., 42-48 months only 49.3% participants acquired this preposition. **Conclusion:** The findings of current study indicate that acquisition of spatial prepositions follows same order in all children cross-culturally, but their age of acquisition can vary according to their locality and language input provided to them.

**Keywords:** Age of Acquisition, spatial prepositions, syntax, Urdu

## INTRODUCTION

Looking at an air balloon going up a toddler says 'up'; putting her toys in a box she says 'in'; taking out toy from the box she says 'out'. In a world filled with greater happenings, these little remarks do not grasp much attention. However, people working or interested in acquisition of communication, find these first steps in language acquisition intriguing, and raise profound questions. The cross-linguistic similarities in language acquisition could be accounted to non-linguistic cognitive developments common to all children. Literature also suggests that cross-linguistic variation in spatial semantic structuring is much diverse than what had been previously thought.<sup>1</sup> Languages provide different conventionalized ways to construe spatial situations. English language speaking children show usage of prepositions like 'in', 'on', 'up', 'down', 'out' and 'off' during one-word stage.<sup>2,4</sup> The meanings of these little particles seem so straight forward that it is easy to assume them as reflection predicting conceptual construing of the world. Although all languages have their own

ways to talk about the spatial positions and locations, for which speakers of English language use these words, but they do not necessarily have translation-equivalent meanings with morphemes.

Preposition (حرف جار) belongs to closed-word class of basic parts of speech and sits before (pre-positioned) its noun or a pronoun to express association with another word or element in the clause. Prepositions make one of the most problematic categories in the theories of syntax as they do not exist in all languages. They also occur as postpositions rather than prepositions in few languages as in Tamil, Hindi, Telugu.<sup>5</sup> In recent syntactic theories, classification of prepositions is based on functional or lexical features. Lexical prepositions give semantic meaning while functional prepositions are only meant to assign case. Yet the classification of same preposition can differ depending on its use e.g., preposition 'to' serves as a lexical spatial preposition in sentence 'I am going to school' and as a functional preposition in sentence 'Give it to me'. According to the stages

of language development proposed by Brown, acquisition of prepositions occurs by the age of 18 to 24 months with the beginning of phrase development among the first 20 words acquired by English speaking children.<sup>3</sup> These findings have enabled the researchers in communication sciences to compare the history and acquisition of components that make language. Diachrony in the English language reveals prepositions' use in spatial aspects before taking the functional form.<sup>6</sup> Phrase is the unit of grammatical correction consisting of one or several words. It may take the form of verb-, noun-, and prepositional phrase etc. Determination of prepositional phrase means that main word would be the preposition e.g., 'outside the house', 'at sunny day'.<sup>7</sup>

Urdu language is morphologically rich and carries several differences in form and use as compared to English language. In Urdu, single preposition 'اوپر' gives varied prepositional expressions in different contexts parallel to English prepositions: 'on', 'above', 'over' and 'up'. Same is true for prepositions 'under', 'below', and 'down' which have only one parallel word in Urdu i.e., 'نیچے'. Some examples of Urdu prepositions in sentences are mentioned with English translates in Table 1 attached in supplementary material.

Research on verbs acquisition in Urdu language revealed striking differences in ages of acquisition in comparison to English language which shows that such differences can also be observed in other categories of syntax acquisition.<sup>8</sup> Urdu is lingua franca of Pakistan and very extensive literature on Urdu language is available. Unfortunately, SLPs working with Pakistani Urdu speaking children have very little information available on Urdu syntax developmental milestones. Developmental ages for acquisition of prepositions hold a great worth to identify deviations in syntactic development because they are among first twenty words that a child acquires.<sup>3</sup> Delay, improper use, or non-emergence of prepositions in speech can be indicative of some communication disorder and can only get an objective base of screening and diagnosis when normative ages of acquisition of prepositions' development would be known. In current practices, norms of English language are used as the base of diagnosis and evaluation which

disregard the morphological diversity of Urdu language which could not be justified by using normative data based on English language speakers.

Although prepositions are limited in number, but they undoubtedly act as vital markers to structure the sentence; they signify special relationships between objects, persons, and locations. In contrast to nouns, verbs and adjectives, propositions are closed class i.e., they do not accept new additions yet important part of communication. To the best of our knowledge, this study is a pioneering study to identify ages of emergence of Urdu prepositions in speech development of young Pakistani Urdu speaking children.

## METHODOLOGY

This cross-sectional survey was conducted in unstructured and informal settings i.e., schools and homes in Islamabad using purposive sampling technique. A self-designed "Urdu Syntax Evaluation Questionnaire (U-SEQ)" was used as a data collection instrument.<sup>9</sup> In this study, section of U-SEQ evaluating use of spatial prepositions (حروف جار) in speech was considered. Checklist of seven prepositions was mentioned in preposition evaluation section of questionnaire. Participants were asked to mark prepositions that their child uses in his/her spontaneous speech. (table 1)

Subject children were from age range 2 to 4 years. Informed consent was assured, and questionnaires were filled by parents, significant others, and teachers of typically developed 2 to 4 years old children. Among teachers only those teachers were selected who had spent six or more months with the subject child. Participants were asked to return questionnaires in 2 to 4 days. This time span was given so that the questionnaire is filled after keenly observing the child for mentioned perspectives. After scrutiny of 420 questionnaires, those with incomplete information or deviations from normal development were excluded from the study and data of N=370 participants were chosen for analysis. Data were analysed descriptively using SPSS version 21.

Table 1: Comparison of Urdu and English Spatial prepositions

Prepositions in English	Sentences	حروف جار	جملے
<b>On</b> /ɒn/	Put your books on the table pʊt jɔː bʊks ɒn ðə teɪb(ə)l	اوپر /uːpər/	اپنی کتابیں میز کے اوپر رکھو apni kiṭā:bē mez ke u:pər rkʰo
<b>Up</b> /ʌp/	Put your hands up pʊt jɔː haɪdʒ ʌp	اوپر /uːpər/	اپنے ہاتھ اوپر کرو apne ha:θ u:pər kro
<b>Above</b> /ə'boʊv/	A bag fell from above ə bag fɛl frɒm ə'boʊv	اوپر /uːpər/	بستہ اوپر سے گرا baʃtə u:pər se gira
<b>Over</b> /'əʊvə/	She put a blanket over her child ʃiː pʊt ə blæŋkɪt 'əʊvə hæː tʃɪld	اوپر /uːpər/	اس نے اپنے بچے کے اوپر کھیل اڑھایا is ne apne bʃeɪ ke u:pər kʌmbl ɔʃhaja
<b>Down</b> /daʊn/	Put it down pʊt ɪt daʊn	نیچے /niːtʃæ/	اسے نیچے رکھو ise ni:tʃæ rkʰo
<b>Under</b> /ʌndə/	Put it under the table pʊt ɪt ʌndə ðə teɪb(ə)l	نیچے /niːtʃæ/	اسے میز کے نیچے رکھو ise meɪz ke ni:tʃæ rkʰo
<b>Below</b> /bi'ləʊ/	He has a mole below his lips hiː hæz ə məʊl bi'ləʊ hɪz lɪps	نیچے /niːtʃæ/	اس کے ہونٹوں کے نیچے تل ہے is ke hoɪtʊ ke ni:tʃæ tɪ he
<b>Between</b> /bi'twiːn/	Put the ball between the table and chair pʊt ðə bɔːl bi'twiːn ðə teɪb(ə)l	درمیان /dʁmjon/	گیند میز اور کرسی کے درمیان رکھو gend meɪz ɔːr kʊrsiː ke dʁmjon rkʰo
<b>Beside</b> /bi'saɪd/	Put the chair beside the table pʊt ðə tʃeː bi'saɪd ðɪ teɪb(ə)l	ساتھ /saːθ/	کرسی میز کے ساتھ رکھو kursiː meɪz ke saːθ rkʰo
<b>In front of</b> /ɪn frʌnt ɒv/	He was standing in front of me hiː wəz stændɪŋ ɪn frʌnt ɒv miː	آگے /aːgeɪ/	وہ میرے آگے کھڑا تھا vo mere aːgeɪ kʰʁaː θaː
<b>Behind</b> /bi'hlaɪnd/	Book fell behind the cupboard bʊk fɛl bi'hlaɪnd ðə'kʌbəd	پیچھے /piːtʃæ/	کتاب الماری کے پیچھے گر گئی kiṭā:b əlmaːri ke pi:tʃæ gir gai
<b>In the middle of</b> ɪn ðə 'mɪd(ə)l ɒv	The boat stranded in the middle of the sea ðə bəʊt 'strændɪd ɪn ðə 'mɪd(ə)l ɒv ðə si	بیچ /biːtʃ/	کشتی سمندر کے بیچ پھنس گئی kʌʃtiː sɑmndr ke bi:tʃ pʰās gai

## RESULTS

Demographic details of sampled participants across age, gender, and relationship of person with child who filled the questionnaire have been mentioned

in Table 2. Age of acquisition of each preposition is considered when 50% or more respondents marked its presence in lowest age category.<sup>10</sup>

Table 2: Distribution of sample across age, gender and relationship with child

Age in months	Relation with child- n (%)				Total
	Mother	Father	Teacher	Others	
24-29	Girls 41 (43.2)	9 (90.0)	0	9 (50.0)	59 (48.0)
	Boys 54 (56.8)	1 (10.0)	0	9 (50.0)	64 (52.0)
	Total 95	10	0	18	123
30-35	Girls 17 (56.7)	5 (55.6)	7 (63.6)	2 (40.0)	31 (56.4)
	Boys 13 (43.3)	4 (44.4)	4 (36.4)	3 (60.0)	24 (43.6)
	Total 30	9	11	5	55
36-41	Girls 12 (37.5)	1 (50.0)	8 (50.0)	0 (0.0)	21 (40.4)
	Boys 20 (62.5)	1 (50.0)	8 (50.0)	2 (100.0)	31 (59.6)
	Total 32	2	16	2	52
42-48	Girls 44 (51.8)	5 (45.5)	13 (36.1)	5 (62.5)	67 (47.9)
	Boys 41 (48.2)	6 (54.5)	23 (63.9)	3 (37.5)	73 (52.1)
	Total 85	11	36	8	140
Total	Girls 114 (47.1)	20 (62.5)	28 (44.4)	16 (48.5)	178 (48.1)
	Boys 128 (52.9)	12 (37.5)	35 (55.6)	17 (51.5)	192 (51.9)
	Total 242	32	63	33	370

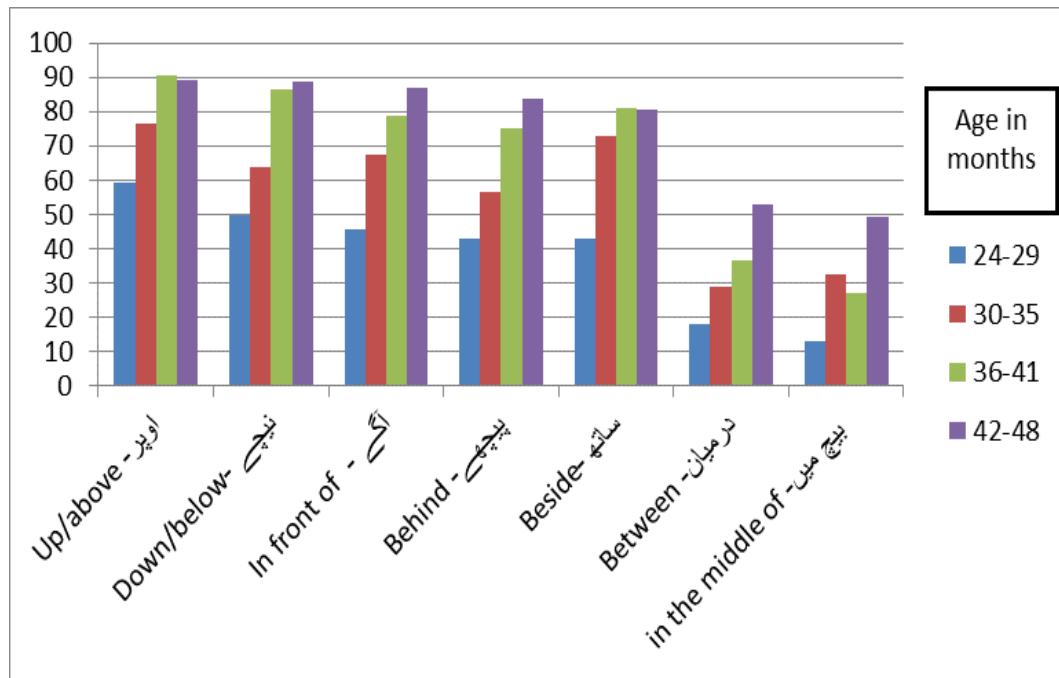


Figure 1: Percentage occurrence of Urdu spatial prepositions in spontaneous speech within each age group

The above figure illustrates that Urdu translates of preposition اوپر i.e., 'up/above/on' and نیچے i.e., 'down/below/under' were acquired in 24-26 months of age with 59.3% and by 42-48 months these were mastered by 89.3% and 88.6%. Urdu parallel forms of prepositions 'in front of (آگے)', 'behind (پیچھے)' and 'beside (ساتھ)' were acquired in 30-35 months with percentages 67.3%, 56.4% and 72.7% respectively. Preposition درمیان (between)

acquired in 42-48 months with response percentage 52.8%. According to findings of this study, age of acquisition of preposition میں (in the middle of) could not be established as even in maximum age limit group i.e., 42-48 months only 49.3% participants acquired this preposition. (figure 1) Distribution of responses across gender within each age range in mentioned in Table 3.

Table 3: Frequencies and percentages of spatial prepositions' acquisition across age groups and gender

Age in months	Gender	Urdu Prepositions f (%)						
		Up/above/on اوپر (Oper)	Down/below نیچے (neechay)	In front of آگے (aagay)	Behind پیچھے (peechay)	Beside ساتھ (sath)	Between درمیان (darmiyan)	In the middle of بیچ میں (beech main)
24-29	Female	36 (49.30)	27 (44.30)	22 (39.30)	26 (49.10)	20 (37.7)	9 (40.9)	6 (37.5)
	Male	37 (50.70)	34 (55.70)	34 (60.70)	27 (50.90)	33 (62.3)	13 (59.1)	10 (62.5)
	Total	73 (59.3)	61 (50)	56 (45.5)	53 (43.1)	53 (43.1)	22 (17.9)	16 (13)
30-35	Female	27 (64.30)	22 (62.90)	23 (62.20)	18 (58.10)	25 (62.5)	10 (62.5)	9 (50.0)
	Male	15 (35.70)	13 (37.10)	14 (37.80)	13 (41.90)	15 (37.5)	6 (37.5)	9 (50.0)
	Total	42 (76.4)	35 (63.6)	37 (67.3)	31 (56.4)	40 (72.7)	16 (29.1)	18 (32.7)
36-41	Female	17 (36.20)	17 (37.80)	15 (36.60)	15 (38.50)	17 (40.5)	5 (26.3)	6 (42.9)
	Male	30 (63.80)	28 (62.20)	26 (63.40)	24 (61.50)	25 (59.5)	14 (73.7)	8 (57.1)
	Total	47 (90.4)	45 (86.5)	41 (78.8)	39 (75)	42 (80.8)	19 (36.5)	14 (26.9)
42-48	Female	57 (45.60)	58 (46.80)	57 (46.70)	59 (50.40)	53 (46.9)	42 (56.8)	33 (47.8)
	Male	68 (54.40)	66 (53.20)	65 (54.30)	58 (49.60)	60 (53.1)	32 (43.2)	36 (52.2)
	Total	125 (89.3)	124 (88.6)	122 (87.1)	117 (83.6)	113 (80.7)	74 (52.9)	69 (49.3)

## DISCUSSION

In the current study it has been observed that preposition 'اوپر' (up/on/above) and 'نیچے' (down/below/under) were acquired by 59.3% and 50% of subject children respectively in youngest age group 24-29 months. Literature on English language suggests that child starts using prepositions 'up', 'down', 'in' and 'on' around 12-24 months.<sup>11, 12</sup> Preposition 'on' emerge early in children's utterances to describe support relations and simple containment e.g., 'ball on the table'. Existing evidence reflects that understanding of 'under' starts developing in 12 to 24 months and in 24-36 months child starts distinguishing between 'in' and 'under' in addition to acquisition of 'under' in spontaneous speech.<sup>11</sup> Different ages of acquisition for 'down' and 'under' indicate that although in Urdu language only one translate i.e., '/ni:tʃæ/ (نیچے)' is used but its acquisition of usage in different spatial situations parallel to 'under' 'down' and 'below' needs to be explored. In a study it was proposed that there is a structured semantic space that children and adults share for support and containment relations, but greater portion of this space is described by prepositions 'on' and 'in' in early development because other descriptions using lexical verbs are inhibited.<sup>13</sup> Besides this, developmental studies reflect that acquisition of these prepositions do not complete by the age of three years, which supports the notion that actual semantic space is far more intricate than it was considered in the pioneering studies of language acquisition, suggesting the organization of this space by language specific lexical contents rather than by pre-linguistic distinctions.<sup>14, 15</sup>

Average age of acquisition of prepositions '/ɑ:geɪ/ (in front of)', '/pi:tʃæ/ (behind)' and 'ساتھ' (beside) in this study was observed around 30-35 months. High percentages of '/ɑ:geɪ/ (in front of)' and '/sɑ:θ/ (beside)' can be indicative of their precise average ages of acquisition soon after 24 months. These findings are indicative of early acquisition of these prepositions in Urdu language speakers as compared to English language speakers. Normative data on English language shows acquisition of 'behind', 'in front' and 'beside' in 36-48 months.<sup>16, 17</sup> In the present study, age of acquisition of /dʁmjɒn/ 'between' was seemed to be 42-48 months which is supported by English language

literature where 36-48 months is its age of acquisition.<sup>11, 18, 19</sup> In the current study, response percentage of preposition /bi:tʃ/ (in the middle of) reached maximum limit of 49.3% in 42-48 months which cannot be determined as AoA according to criterion mentioned. Studies conducted on English language speakers support acquisition of preposition 'in the middle of' after 48 months in typically developing child.<sup>17</sup>

The child does not construct but identifies the concept from among a set of conceivable possibilities. There is huge compelling evidence that supports the role of non-linguistic cognition of spatial words by indicating their emergence over long period in a consistent order, both within and across children of same and different language learners respectively. Particularly, words referring topological and functional notions of containment e.g., 'in', support and contiguity e.g., 'on' and occlusion e.g., 'under' emerge first.<sup>20</sup> Later, words regarding proximity e.g., 'next to', 'beside' and 'between' appear. Finally, words showing projective relationships e.g., 'in front of, and 'behind' emerge.<sup>21</sup> Piaget and Inhelder (1967) established the order of acquisition of spatial concepts consistent with the aforementioned order by the use of non-linguistic tests.<sup>20</sup> A more straightforward hypothesis accounts for these sequential relations as new spatial notions develop non-linguistically, children discover existing forms used to express them in their native language.<sup>22, 23</sup> Consistent with these findings it was found that as early as the one-word stage, generalizations of words like 'out', 'off', 'up' and 'down' projects to varied events that resemble in trajectory of movement, abstracted across kinds made up of different entities.<sup>24, 25</sup>

## CONCLUSION

Findings of the present study indicates that age of acquisition for Urdu spatial prepositions 'اوپر' (on) and 'نیچے' (down) is 24-26 months. Prepositions 'آگے' (in front of)', 'پیچھے' (behind)' and 'ساتھ' (beside) were acquired in 30-35 months. Spatial prepositions 'درمیان' (between)' acquired in 42-48 months and 'بیچ میں' (in the middle of) did not meet the criteria of acquisition in any age group with maximum percentage of 49.3% in age category 42-48 months. Findings of the present study indicates

that acquisition of spatial prepositions follow same order in all children cross-culturally, but their AoA can vary according to their locality and language input provided to them. In future, the lowest age limit could be set at 18 months, considering the evidence of acquisition of prepositional phrases in this age according to Brown's stages of language development. Furthermore, direct observation and evaluation of speech samples of subject children can enable us to improve the internal validity of findings revealed in present study.

## REFERENCES

1. Bowerman M. Learning how to structure space for language: A crosslinguistic perspective. *Language and space*. 1996;385-436.
2. Bloom L. One Word At a Time: The Use of Single Word Utterances Before Syntax Mouton. The Hague, the Netherlands. 1973. doi:10.7916/D8H995NS
3. Brown R. 1973: A first language: the early stages. Cambridge, MA: Harvard University Press. 1973. doi:10.1017/S030500090000074X
4. Gopnik A, Meltzoff AN. Words, plans, things, and locations: Interactions between semantic and cognitive development in the one-word stage. *The development of word meaning*: Springer; 1986. p. 199-223.
5. Saint-Dizier P. Introduction to the syntax and semantics of prepositions. *Syntax and semantics of prepositions*: Springer; 2006. p. 1-25.
6. Go G-Y. The synchrony and diachrony of the English prepositional passive: \* Form, meaning, and \* function: The Ohio State University; 2000.
7. Murthi A. *New Grammar Magic* – 6. 3rd ed. New Delhi: Vikas Publishing House; 2018.
8. Shafqat F, Mumtaz N, Adeel H. Verbs acquisition in speech development among urdu speaking children in pakistan. *Int J of Rehab Sci (IJRS)*. 2018;7(01):8-11.
9. Shafqat F. Acquisition of Urdu syntax: nature of early grammar of Urdu speaking children among Pakistanis 2016.
10. Ogura T, Yamashita Y, Murase T, Dale P. Some findings from the Japanese early communicative development inventory. *Memoirs of the Faculty of Education*. 1993;29:27-39.
11. Nicolosi L, Harryman E, Kresheck J. Terminology of communication disorders: Speech-language-hearing: Lippincott Williams & Wilkins; 2004.
12. Rice S. Growth of a lexical network: Nine English prepositions in acquisition. *Cognitive approaches to lexical semantics*. 2003;23:243-80.
13. Johannes K, Wilson C, Landau B. The importance of lexical verbs in the acquisition of spatial prepositions: The case of in and on. *Cognition*. 2016;157:174-89.
14. Gentner D, Bowerman M. Why some spatial semantic categories are harder to learn than others: The typological prevalence hypothesis. *Crosslinguistic approaches to the psychology of language: Research in the tradition of Dan Isaac Slobin*. 4652009. p. 480.
15. Bowerman M, Choi S. 16 Shaping meanings for language: universal and language-specific in the acquisition of spatial. *Language acquisition and conceptual development*. 2001;3:475.
16. Nicolosi L, Harryman E, Kresheck J. Terminology of communication disorders: Speech-language-hearing. 5th ed: Lippincott Williams & Wilkins; 2004.
17. Lanza J, Flahive L. *Linguistics guide to communication milestones 2012 edition*. East Moline, IL: LinguiSystems, Inc. 2008.
18. Foster-Cohen SH. *An introduction to child language development*: Routledge; 2014.
19. Bochner S, Jones J. *Child language development: Learning to talk*: John Wiley & Sons; 2008.
20. Piaget J, Inhelder BE. A Child's Conception of Space (FJ Langdon and JL Lunzer, Trans.) *British Journal of Educational Studies* 5 (2): 187-189 (1957). New York: Norton. <http://philpapers.org/asearch.pl>; 1967.
21. Johnston J. R., & Slobin, D. I. (1979). The development of locative expressions in English, Italian, SerboCroatian and Turkish. *Journal of Child language*. 6:529-45.
22. Johnston JR. Cognitive prerequisites: The evidence from children learning English. *The cross-linguistic study of language acquisition*. 1985;2:961-1004.
23. Sinha C, Thorseng LA, Hayashi M, Plunkett K. Comparative spatial semantics and language acquisition: Evidence from Danish, English, and Japanese. *Journal of Semantics*. 1994;11(4):253-87.
24. McCune-Nicolich L. The cognitive bases of relational words in the single word period. *Journal of Child language*. 1981;8(1):15-34.
25. Smiley P, Huttenlocher J. Conceptual development and the child's early words for events, objects, and persons. *Beyond names for things: Young children's acquisition of verbs*. 1995:21-61.

**Disclaimer:** None to declare.

**Conflict of Interest:** None to declare.

**Funding Sources:** None to declare.