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EFFICACY OF USING SIMILE COMPLETION TASKS AS A MEASURE TO EVALUATE THE FIGURATIVE LANGUAGE ABILITIES IN ADOLESCENTSAGED BETWEEN 10-15 YEARS

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ABSTRACT

Language development is an ongoing process. The understanding of figurative expressions such as similes begins during the preschool years with subsequent improvement throughout childhood, adolescence, and into adulthood. Studies pertaining to the development of such higher language skills are limited, especially in a multilingual setup like India.

Participants were divided into six groups (10-10.11,11-11.11, 12-12.11, 13-13.11, 14-14.11 and 15–15.11 years), with each group consisting of 5 children each. The groups selected for the present study were also classified into the Piaget's cognitive stages. The participants were required to fill in the incomplete figurative expressions (similes). The responses were recorded. Univariate Analysis of Variance was employed to determine the main significant difference across two variables - chronological group and the cognitive stage.

Results revealed a significant main effect in the means of the accurate responses for the simile completion tasks across the chronological as well as the cognitive groups.

The results of the present studyrevealed a steady increase in the comprehension of figurative expressions which was in accordance to other studies that were done on similar lines.

The ability to understand similes follows a developmental pattern, and probably continues to develop even after 15 years. The responses obtained by the participants in the present study improved with age there by suggesting that the amount and quality of knowledge that a child possesses concerning a figurative expression, does play an important role in the child's comprehension of such higher language aspects.

Key words: simile, figurative, development, adolescent

INTRODUCTION

Learning language is synergistic in nature and the process of its development starts early in human life. Although majority of language development occurs in the infant through preschool years, development continues throughout adolescence. The Centers for Disease Control and Prevention considers the age range for adolescents as 10-19 years and considers 20-24 years olds as young adults. During adolescent development,

individuals learn to use more complex language and to communicate differently depending on the situation.The use of figures of speech helps increase the knowledge of vocabulary, organize and memorize new words, and to integrate and improve language awareness and use.Tajalli opined that, figurative language which uses figures of speech provides clearness and beauty in the language. Studies have indicated the use of figurative language to be as frequent as its literal counterparts and in certain instances the usage of the former may be even more frequent than the latter(Deirdre Wilson and Carston; Wilson and Carston; Sperber and Wilson).The frequent occurrence of figurative expressions such as similes in a conversational speech as well as in academic contexts for the middle to upper grade elementary school children have been the area of research concern.A simile inserts an explicit comparator such as 'like' taking the form '*A is like B'* (For e.g., 'The camel is like the ship of the desert')(Verbrugge), and also '*A is as B as C'. (*For e.g., 'He is as clever as a fox').

Several studies were done to examine the ability of typically developing children in the comprehension of the types of figurative language(Kogan et al.; Winner, Engel, and Gardner; Cicone, Gardner, and Winner; Wagner et al.).All these studies indicate that, though there is a basic ability to comprehend figurative expressions during the preschool years(Vosniadou and Ortony; Dent; Vosniadou et al.; Pearson), refinement of these skills persist atleast throughout their early adulthood(Boswell; Waggoner, Messe, and Palermo; Kogan and Chadrow; Siltanen; Kubicka).Early studies on later language development pertaining to metaphors and similes emphasized on the fact that certain cognitive prerequisites should be present before a child comprehends such expressions. Studies have been done on the relationship between cognitive development and figurative language in typically developing adolescents, and the researchers found a steady improvement in the comprehension of figures of speech with a simultaneous development in their cognitive stages (from concrete operational to formal operational thinking)(Billow). Studies have found children in their preadolescent years (9–12 years), to exhibit a sudden spurt in competence(Lodge and Leach; Cometa and Eson), with a parallel advancement into the cognitive stage of formal operations(Inhelder and Piaget).In spite of India being a multilingual country, studies pertaining to adolescent language are still at its infant stage. As the adolescent language consists of the attainment of higher language skills such as the interpretation and usage of figurative expressions, it would be interesting to know the pattern of their acquisition in a polyglottic setup. Thoughsimiles occur more frequently in discourse than metaphors, it is much less investigated than the latter. Studies of this nature are the need of the hour(Van der Merwe), because deficits of comprehension of figurative language(Bishop and Adams; Nippold; Botting and Adams)largely go undetected in certain children with language disorders. This study aims to determine the developmental trend in the comprehension of similes in typically developing children between 10– 15 years of age.

Materials and Methods

The present study was conducted in a relatively quiet room of an English medium school for typically developing (in terms of language and scholastic development) children in Mangalore, a place located in the Southern part of India. The children were of either L1 (first language) being Kannada/Tulu (South Indian languages), while L2 (second language) always being English. The study was attained ethical clearance from the Institutional Ethical Committee at Kasturba Medical College, Mangalore and the informed consent was obtained prior to the conduction of the study.

Participants

The participants in the current study were selected from six age groups(10–10.11, 11–11.11, 12–12.11, 13–13.11, 14–14.11 and 15–15.11 years). The six age groups selected for the present study was also classified into the Piaget's cognitive stages. Group 1 and 2 between 10 - 11.11 years was considered to be under the 'concrete-operational stage'; Group 3, 4 and 5 between 12 – 14.11 years as the 'late concrete-early formal operational stage', and finally Group 6 between 15 – 15.11 years, as the beginning of the 'formal operational stage'.

The class teachers recruited five children randomly from each group, thereby making a total of 30 participants. The participants underwent screening for any significant deficits in speech, language and hearing, or any cognitive issues affecting the academic functioning, using a checklist (Appendix).

Procedure

The present study used similes that use an unambiguous comparator unlike metaphors, inorder to explore the figurative language abilities in children. Studies have concluded that similes were much easier to comprehend than metaphors. Hence the present study targeted using similes than metaphors, because of its explicit nature(Hyde-Wright and Cray).Commonly occurring similes were selected from the child's core curriculum (within the chapters of the English literature, as well as student academic exercises after a chapter). In addition to these, other commonly occurring similes from popular children's literature were also considered.The study consisted of a total of 38 figurative expressions (similes). The experimental paradigm followed a sentence (simile) completion task, adapted from another study(Hyde-Wright and Cray). Worksheets containing the incomplete expressionswere given to the students,and they were expected to fill in the missing word. For example: As cool as a _____ (correct responses being *'cucumber', 'iceberg', 'cat', 'swan', 'breeze', etc*). As seen from the example, the total number of possible correct responses may be numerous. However, the student was expected to provide atleast one correct response.

Scoring and Analysis

A score of one was given for correct responses and incorrect responses received a zero score.SPSS (16) was used to determine the mean scores under each of the six groups. Univariate Analysis of Variance was employed to determine the main significant difference across two variables - chronological group and the cognitive stage. Bonferroni Post Hoc Analysis was done to determine the level of significance between each of the six age groups and the cognitive stages.

RESULTS

Descriptive statistics were employed to determine the mean of the accurate responses for the simile completion tasks across two variables: group-wise and stage-wise. The group-wise is with reference to the calculation of the means under each chronological age group (10-10.11, 11-11.11, 12-12.11, 13-13.11, 14-14.11, and 15–15.11 years). Stage-wise refers to the means calculated under each of Piaget's cognitive stages (concrete-operational, late concrete-early formal operational and formal operational stage). The following tables exhibit the mean values of the accurate responses for the simile completion task across groups and stages respectively.

Table 1: The mean accurate responses for the simile completion task across the age groups (group-wise).

Age groups (years)	Chronological groups	Mean value
10 – 10;11	1	14.8
11 – 11;11	2	13.4
12 – 12;11	3	16.8
13 – 13;11	4	18.8
14 – 14;11	5	25.6
15 – 15;11	6	28.4

Table 2: The mean accurate responses for the simile completion task across the Piaget's cognitive stages (stage- wise).

Age groups (years)	Piaget's Cognitive stages	Mean value
10 – 10.11 11 – 11.11	Concrete-operational stage	14.1
12 – 12.11 13 – 13.11 14 – 14.11	Late concrete-early formal operational stage	20.4
15 – 15.11	Formal operational stage	28.4

The group-wise comparison reveals a progressive improvement in the mean values across the chronological age groups, with a marked increase at 14 years of age (see table 1). However, an exceptional performance was observed in group 2, which was the only group with decreased scores when compared to the previous age group. According to the stage-wise comparison, the mean

accurate responses were observed to increase across the three groups (see table 2). Univariate Analysis of Variance yielded a significant main effect across group-wise and stage-wise, $F(3, 24) = 4.248$, $p < 0.05$. Multiple comparisons were carried out using Bonferroni Post Hoc test ($p< 0.05$). The following table represents the group-wise comparison across each of the groups.

Table 3: The Bonferroni Post Hoc test values and its level of significance for the accurate responses of the simile completion tasks across all the age groups.

Group-wise comparison		p-value	Significance
Group 1	Group 2	1.000	NS
Group 2	Group 3	1.000	NS
Group 3	Group 4	1.000	NS
Group 4	Group 5	0.235	NS
Group 5	Group 6	1.000	NS

The above results did not receive any significant difference ($p>0.05$) between the groups. Similarly, multiple comparisons were also carried out across the cognitive stages. The following table represents the stage-wise comparison.

Table 4: The Bonferroni Post Hoc test values and its level of significance for the accurate responses of the simile completion tasks across Piaget's cognitive stages.

Stage-wise comparison		p-value	Significance
Concrete operational stage	Late concrete-early formal operational stage	0.003	Sig
Late concrete-early formal operational stage	Formal operational stage	0.003	Sig

The above results indicates a significant difference between all the cognitive stages at $p<0.05$.

DISCUSSION

The present study focused on exploring the nature of a figurative expression such as a simile that is explicit in nature. Six age groups (10–10.11, 11–11.11, 12–12.11, 13–13.11, 14–14.11 and 15–15.11 years) were included in the study, with each group consisting of randomly selected five individuals. The six groups were also categorized in terms of the cognitive stages (concrete-operational stage, late concrete-early formal operational stage and the formal operational stage). A simile completion task was administered on the participants. Descriptive statistics and Univariate Analysis of Variance was employed to identify the mean accurate responses and the level of significance between all the groups. Results revealed an increase in the mean accurate responses and a main significant difference across the group-wise and stage-wise variables.

It was observed that participants of group 1 obtained lesser mean accurate responses when compared to group 3; and group 3 obtained a lesser mean value when compared to its subsequent group, and so on. Univariate Analysis of Variance revealed a significant main effect across the chronological age group at $p<0.05$. This suggests a steady increase in the comprehension of such higher order language skills, being figurative expressions in this study. Hence the current findings can be considered to be in agreement with other studies(Boswell; Waggoner, Messe, and Palermo; Kogan and Chadrow; Siltanen; Kubicka)which also reveals an improved figurative language abilities with an increase in chronological age. However, Bonferroni Post Hoc test failed to indicate significant differences ($p>0.05$) in the performance of figurative expressions among the chronological age groups. The fact that majority of the studies done were pertaining to metaphorical expressions as against the similes in the present paper, could be reasoned for this observation.

Furthermore, another aspect of the study was with respect to the allocation of the participants of the study under different cognitive stages of development. In the current study, the groups present under the 'concrete-operational stage' seemed to have performed slightly poorer than 'late concrete-early formal operational' who in turn performed poorer than 'formal operational stage'. This was an expected trend which indicated an increase in the accurate responses across the cognitive stages. Univariate Analysis of Variance

revealed a significant main effect across the cognitive stages at $p<0.05$. To exemplify the results, the Bonferroni Post Hoc test ($p<0.05$) also revealed a positive finding. Similar studies were also reported a parallel development across the cognitive stages and figurative language(Lodge and Leach; Cometa and Eson).

An interesting finding in the present study was the poorer performance by group 2 compared to group 1. This pattern did not follow the trend observed with the succeeding groups. However, when the performance of group 2 was analysed from the cognitive perspective, comprising of the concrete-operational stage (group 1 & 2), a typical developmental sequence was observed. Another possible reason for the deviation could be also due to a small sample size. Moreover, though there was a progressive improvement in the mean accurate responses in the simile completion task, the final group (group 6) had still not attained 100% accuracy. In line with this, proverb comprehension, which is another aspect of figurative language, was reported to be not mastered in adolescents(Nippold, Uhden, and Schwarz).This indicates that the development of figurative language is ongoing throughout early adulthood.

Hence, the results of the current study are in accordance with the proposed hypothesis stating that the mean accurate responses for the figurative language production increases with chronological and as well as the cognitive stages. Numerous other studies(Kogan et al.; Winner, Engel, and Gardner; Cicone, Gardner, and Winner; Wagner et al.)are also in support of the present finding. The responses obtained by the participants in the present study improved with age there by suggesting that the amount and quality of knowledge that a child possesses concerning a figurative expression, does play an important role in the child's comprehension of such higher language aspects.

Conclusion

The present research was taken up to study the developmental trend in the understanding of figurative expressions such as similes in the typically developing Indian children between the age groups of 10 – 15 years. The results indicated that the ability to understand similes follows a developmental pattern, and probably continues to develop even after 15 years. Moreover, using simile completion tasks does conclude that it can be used to assess figurative language abilities in adolescents. However the results of the present study need strengthening by involving larger number of participants and also by including other aspects of figurative language.

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Appendix

QUESTIONNAIRE FOR TEACHERS

Name of the student: Class:
D.O.B: Gender:
Name of the school:
Please tick accordingly under the appropriate column for each of the following questions:

PERCEIVED ACADEMIC POTENTIAL:	**Yes**	**No**
In view of the child's perceived intellectual ability or academic potential, do you think his/her reading, spelling, or writing skills are adequate?		

LANGAUGE:	**Yes**	**No**
Does the student delete/omit word endings?		
Does the student use short or incomplete sentences?		
Does the student use incorrect word order and/or word choice?		
Can the student ask questions, describe, tell stories, or give directions?		
Does the student interact well with other students?		
Does the student enjoy classroom story-time and fails to pay attention to the teacher?		
Does the student have difficulty understanding proverbs, metaphors, idioms and jokes?		

SPEECH:	**Yes**	**No**
Is the student's pronunciation clear?		
Does the student get "stuck", or repeat sounds, syllables, or words?		
Does the student exhibit extra behaviors such as facial grimaces, eye blinking, or vocal sounds while talking?		

VISUAL AND AUDITORY PERCEPTION	**Yes**	**No**
Does the student exhibit difficulty in focusing on a figure with background (e.g. difficulty locating things; skipped words, lines)?		
Does the student get disoriented about position in space or have a poor sense of direction?		
Does the student have difficulty detecting subtle differences in phonemes [Mixes up similar sounding words (9 for fine)]?		
Can the student focus on sounds with competing background noise. (Seems not to listen to teaching, with attention being paid to other sounds like fan.)?		
Does the student have difficulty in concentrating on verbal discussion for a long time?		

MEMORY &ORGANIZATION:	**Yes**	**No**
Does the student have problems in memorizing what is being heard or told?		
Does the student have difficulty recalling what is seen?		
Is the student unable to plan ahead/organize time?		

Does the student have a messy notebook or bag?		
Does the student loose books, assignments, pencils, etc?		

READING AND WRITING:	**Yes**	**No**
Does the student have difficulty identifying basic sight words (school, home, are)?		
Does the student have difficulty reading out words using phonics skills?		
Does the student have problems understanding text read aloud by others/self?		
Does the student have a slow and laborious oral reading?		
Is the student's handwriting often illegible, messy or disorderly?		
Does the student have difficulty with spellings and writing alphabets in sequence?		
Does the student exhibit an awkward pencil grip, tight or fist-like?		
Does the student exhibit avoidance for writing?		

ARITHMATIC AND SEQUENCING:	**Yes**	**No**
Does the student have difficulty remembering mathematic processes and rules?		
Is the student able to do mental mathematics?		
Does the student have confusion between signs and symbols in mathematics?		
Does the student recall numbers/events in the wrong sequence?		
Does the student mix up mathematical operations (2+5=3)?		
Does the student mix up numbers when copying (61=16)?		

OTHER PROBLEMS:	**Yes**	**No**
Does the student have difficulty following rules?		
Does the student show little or no engagement in classroom literacy activities?		
Does the student have mood variations from time to time without any obvious reason?		

Name of the teacher:
Teaching experience:
Classes handled:
Classes handling presently: