Introduction:
Bilinguals are defined as those who use two (or more) languages in one’s routine life, without knowing two or more languages equally well and optimally (1). Bilinguals can be categorized into sequential and simultaneous depending on age and manner of language acquisition (2). Simultaneous bilinguals are those who acquire two languages from infancy. Sequential bilinguals are those who are exposed to and acquire one language first and learn the second language after obtaining some competence in the first (2). One amongst the several tasks to assess the vocabulary of an individual is verbal fluency. It is a free naming, time dependent task, which requires the participant to name as many exemplars as possible from a particular category (semantic fluency) or beginning from a particular letter (phonemic fluency) in 60 seconds time frame. Verbal fluency is a commonly used measure in monolingual (3) and bilingual adults. Research involving verbal fluency usage in bilingual children, is very sparse (4-5).

Abstract: The current study aims at investigating the influence of socio-economic status on semantic fluency performance in Kannada-English sequential bilingual children. The objectives of the study were to compare performance on semantic fluency task in typically developing Kannada-English sequential bilingual children from middle and low socio-economic status (LSES and MSES). Study recruited a total of 50 students, studying in 3rd standard who were Kannada-English sequential bilingual children from middle and low socio-economic status (LSES and MSES). The total number of correct word production across animal fluency task of semantic fluency was assessed in Kannada (L1) and English (L2). Poisson’s regression was done. Results indicated significantly poorer performance of LSES children when compared to MSES peers, with respect to total word production and production across languages. This shows that socioeconomic status is an important factor in determining the word output in children.

Key Words: Bilingual, semantic fluency, low socio-economic status, children

Introduction:
Bilingual children agglutinate morphology, where there is no common consensus regarding the effect of SES on verbal fluency production in bilingual population. There has not been any research done till date which considers the effect of the socio-economic status on the semantic fluency development in Kannada-English sequential bilingual children.

Kannada is a Dravidian language, spoken in South India, which has agglutinative morphology, where there is no variability in morphemes between different contexts and the boundaries of these morphemes is easily identifiable (10) as...
Compared to English, which has an isolate morphology in which all morphemes are free, with fixed word order. There are approximately 255 million bilinguals and 87.5 million multilinguals in India. The current study therefore aims at investigating the effect of socio-economic status (middle and low socioeconomic status) on semantic fluency performance in Kannada-English sequential bilingual children.

Method

Using a cross-sectional study design, semantic fluency was tested in school-aged children. Fifty, 3rd standard Kannada-English sequential bilingual children were recruited from two government schools with Kannada as the medium of instruction (low socio-economic status group, n=20) and three private schools with English as a medium of instruction (middle socio-economic group, n=30). Children were given a task of animal fluency where they were instructed to name as many animals as possible in time duration of 1 minute. The testing was done in Kannada as well as English and a time gap of 1 week was given between the testing of both the languages to avoid the effect of cross-language interference.

Children were divided into two groups based on their socio-economic status (according to their parental occupation) with group I as low socio-economic status (LSES) and group II as middle socio-economic status (MSES). The outcome measure selected for the study was the Total number of correct words (TNCW), which is the total number of correct word production excluding the erroneous responses. Example: if the production is “cow, cat, dog, goat, cow” then the TNCW is 4. The total number of correct words was estimated across two groups and two languages (Kannada & English). Statistical analysis included descriptive statistics (Mean and SD) and Poisson’s regression to estimate mean ratio of the scores as the data was a count data. The statistical analysis was done using Statistical Package for Social Sciences (SPSS) version 15.0 for windows (Chicago, Inc.). A ‘p’ value of less than 0.05 was considered to be statistically significant.

Results & Discussion

The objectives of the study were to compare performance on semantic fluency task in typically developing Kannada-English sequential bilingual children from middle and low socio-economic status (LSES and MSES). Table 1 depicts the descriptive statistics of mean and standard deviation of Total number of correct words produced by LSES and MSES group across L1 (Kannada) and L2 (English).

<table>
<thead>
<tr>
<th>Category</th>
<th>Group</th>
<th>p Value</th>
<th>Mean ratio</th>
<th>Confidence interval (95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL1</td>
<td>I</td>
<td>0.311</td>
<td>0.901</td>
<td>0.737,1.102</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AL2</td>
<td>I</td>
<td>0.000</td>
<td>0.345</td>
<td>0.270,0.441</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Poisson’s regression was done to check for the accuracy of the results and also for the comparison of production in LSES and MSES group for animal fluency task. The results indicated that there was a mean ratio of 0.901 of group I in comparison to group II which was maintained as the reference group in L1. This indicates that the performance of group I is poorer to that of the group II. This difference in score was however not statistically significant (p=0.311). In L2, there was a significant increase in the total number of words produced by group II than group I (p=0.000). A mean ratio of 0.345 was observed in group I with group II kept as reference, indicating that the MSES group outperformed the LSES group in English.

The current study finding of better performance in MSES as compared to LSES are in consonance with earlier research (7, 9). This decrease in scores in children from a low socio-economic background could be attributed to the impoverished educational experience, reduced exposure to reading and due to reduced communicational interactions between the child and parent. Another reason that could be attributed for the reduced word production in LSES group in L2 could be due to the reduced exposure to the language as the medium of instruction in schools and the language commonly used for interaction is Kannada.

Thus, the current study findings indicate a significant difference in scores on the animal fluency task in the LSES group in comparison to MSES. This difference could be due to the lack of exposure to the language or due to the impoverished educational experience. In the context of limited literature evidence on effects of bilingualism and socio-economic status on verbal fluency in Indian context, present study adds on to the existing knowledge of semantic fluency in bilingual children. Future studies could be done on a larger population employing the phonemic as well as semantic fluency tasks.

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References:


