



RESEARCH ARTICLE

PHONOLOGICAL AWARENESS IN DIFFERENT SOCIOECONOMIC AND AGE GROUPS

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ARTICLE INFO

Article History:

Received 23rd December, 2017
Received in revised form
27th January, 2018
Accepted 07th February, 2018
Published online 28th March, 2018

Key words:

Speech Language,
Phonology

ABSTRACT

Phonological awareness is the sensitivity to the segmental nature of the speech, an understanding that spoken language comprises of discrete units ranging from entire words and syllables to smaller intra-syllabic units of onsets, rimes and phonemes. Acquisition of phonological awareness skills has been found to be essential for the development of literacy. Measurement of phonological awareness has become crucial because, these abilities consistently predict reading ability in typically developing children (Ehri, 1999; Wood and amp; Terrell, 1998). Several studies have indicated that socioeconomic status and phonological awareness are related, but not many studies in this area, especially in Malayalam language, have examined the possibility that age moderates this relation (McDowell, Goldstein, 2007) i.e., that the effect of SES on phonological awareness is different at different ages. Therefore, the present study attempted to study the phonological awareness in different socio-economic status and age groups in Malayalam speaking children. 480 subjects were considered for the study and they were in the age range of three to seven years. They were divided into four groups, i.e., group I (3-4 years); group II (4-5 years); group III (5-6 years); group IV (6-7 years). Each group further divided into two subgroups again based on socio economic status: mid and high. Out of them 240 subjects were attending kindergarten and rest of them were attending Grade I and Grade II. The results of the analysis revealed that, the scores of the subjects for each of the tasks increased with an increase in age, the scores of the subjects from high socio economic status were higher when compared to scores of subjects from mid socio-economic status and no significant difference was found between the performance of males and females for all groups.

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Citation: Krishna Priya, G., Gish Chacko and Vijay Kumar Avilala, 2018. "Phonological awareness in different socioeconomic and age groups", International Journal of Current Research, 10, (03), 66829-66838.

INTRODUCTION

"Human communication embodies a rich tapestry of information conveyed through vocalizations, gestures and emotional expression. Communication involves all means by which information is transmitted between a sender and receiver" (Elena Plante, 2004). As a social behaviour, communication is a key element in defining humans as social beings. Communication occurs when a sender transmits a message through symbols placed in a shared code that is understood by a receiver (McLaughlin, 2006, 1998). Communication is a highly complex and dynamic phenomenon whereby the sender and receiver of the message are continuously co-ordinating and modifying their present and anticipated actions according to others signals (Fogel, 1993). Speech is a verbal means of communicating or conveying meaning. The result of planning and executing specific motor sequences, speech is a process that requires very precise neuromuscular coordination "Owens, 1996).

Van Riper (1990) defines "speech as the audible manifestation of language". Language is defined as "a socially shared code or conventional system for representing concepts through the use of arbitrary symbols and rule-governed combinations of those symbols" (Owens, 1996). Language can also be defined as a social behaviour, as a complex learned behaviour, or a system of mental rules (McLaughlin, 2006, 1998). Language is a complex system, Language can be best explained by breaking it down into its functional components. Components of language include form, content and use (Bloom and Lahey, 1978). Form included phonology, morphology and syntax, the components that connects sounds and symbols in order. Content encompasses meaning or semantic, and use is termed pragmatics. These five components phonology, morphology, syntax, semantics and pragmatics are the basic rule systems found in language. As language is used, one codes idea (semantics), i.e., one use a symbol – a sound, a word, and so forth, to stand for an event, object, or relationship. To communicate these ideas to others, certain forms are used, which include appropriate sound units (phonology), the appropriate word order (syntax), and the appropriate words and word beginnings and endings (morphology) to clarify meaning more specifically.

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Speakers use these components to achieve certain communication ends, such as gaining information, greeting or responding. Phonology as postulated by Gilbert (1982) is the study of speech structure within a language, including both the patterns of basic speech units and the accepted rules of pronunciation, i.e., Phonology is the aspect of language concerned with the rules governing the structure, distribution and sequencing of speech sounds and the shape of the syllables. According to Ladefoged (1993) phonology can be defined as “the description of the systems and patterns of phonemes that occur in a language. It involves determining the language specific distinctive phonemes and the rules that describe the set of changes that take place when these phonemes occur in words”. Each language employs a variety of speech sounds or phonemes. A phoneme is the smallest linguistic unit of sound that can signal the meaning. Phonemes are actually families of very similar sounds.

The speech and language development follows a predictable sequence. However, there is a great deal of variation in the age at which children reach a certain milestone (Owens, 1987). Furthermore, each child’s development is usually characterized by gradual acquisition of particular abilities. Thus correct use of verbal inflection will emerge over a period of a year or more, starting from a stage where verbal inflections are always left out, and ending in a stage where they are nearly always used correctly (Owens, 1987). There are also many different ways to characterize the developmental sequence. As language development occurs, various aspects such as paralinguistic and met linguistic skills also develop in children (Owens, 1987).

In the recent years metalinguistic awareness in children has drawn considerable attention from developmental psychologists, educationists and Speech Language Pathologists. Metalinguistic awareness may be defined at the general level as the ability to think about and reflect upon the nature and the functions of language (Pratt and Grieve, 1984). It is the ability to think about and reflect upon the structural and functional features of the language (Tunmer, Praat and Harriman, 1984). To be metalinguistically aware, is to begin to appreciate the stream of speech, beginning with the acoustic signal and ending with speakers intended meaning, can be looked at with the minds eye taken apart. A metalinguistically aware child may perform well on a task involving manipulation of phonemes without knowing what the term ‘phoneme’ means (Pratt, Tunmer, and Harriman, 1984). Phonological awareness is the sensitivity to the segmental nature of the speech, an understanding that spoken language comprises of discrete units ranging from entire words and syllables to smaller intra-syllabic units of onsets, rimes and phonemes. It refers to the broad range of skills in the awareness and manipulation of sound structures at the syllabic and phonemic level. Phonological awareness is often considered to be an aspect of ‘metalinguistic awareness’ which is the ability to reflect on and manipulate the structural features of language independent of the meaning. There are three units of phonological awareness that are widely accepted (Goswami and Bryant, 1990; Trieman and Zukowski, 1991; Høien *et al.*, 1995):

- Syllabic awareness: This is the ability to detect constituent syllables in words.
- Intra-syllabic awareness: It involves the awareness of onset and rime. Most words can be broken down into parts, the beginning and the remainder. The onset is part

of the word upto the first vowel. The part that follows the onset is known as the rime.

- Phonemic awareness: Phonemic awareness emphasizes the awareness of every constituent phoneme in a word.

Of these, phonemic awareness is the deepest level of phonological awareness and the most crucial to success in reading and spelling (Lonigan, Burgess, Anthony and barker, 1998). Acquisition of phonological awareness skills has been found to be essential for the development of literacy. Measurement of phonological awareness have become crucial because, these abilities consistently predict reading ability in typically developing children (Ehri, 1999; Lonigan, Burgess, Anthony and Barker, 1998; Wagner, Torgesen and Rashotte, 1994; Wood and Terrell, 1998) and current models of literacy acquisition emphasize the phonological route in word decoding (Ehri, 1999). A substantial body of evidence has put forth that phonemic awareness is necessary for reading acquisition (Mann, 1993). Phonological awareness has been identified as one of the most important predictors of reading success that should be addressed in kindergarten and primary school (Bryant and Bradley, 1985). These skills may develop as a consequence of the child learning to read (Morais, Cary, Algeria and Bertleson, 1979) or there may be a reciprocal relationship between the two abilities (Gathercole and Baddely, 1993). Several studies have indicated that socioeconomic status and phonological awareness are related, but not many studies in this area, especially in Malayalam language, have examined the possibility that age moderates this relation (McDowell, Goldstein, 2007) i.e., that the effect of SES on phonological awareness is different at different ages. Therefore, the present study attempts to study the phonological awareness in different socio-economic status and age groups in Malayalam speaking children.

As reported by Bloom and Lahey (1978), language acquisition progresses across these components with increasing quantity (e.g., sounds, words, and sentence length) and gradual refinement, and understanding the subtler and more complex points of usage. A common progression for natural languages is that they are considered to be first spoken, and then written, and then an understanding and explanation of their grammar is attempted (Bloom and Lahey, 1978). Language is studied in terms of Phonology, morphology, syntax, semantics and pragmatics. Phonology as postulated by Gilbert(1982) is the study of speech structure within a language, including both the patterns of basic speech units and the accepted rules of pronunciation, i.e.,Phonology is the aspect of language concerned with the rules governing the structure, distribution and sequencing of speech sounds and the shape of the syllables. According to Ladefoged (1993) phonology can be defined as “the description of the systems and patterns of phonemes that occur in a language. It involves determining the language specific distinctive phonemes and the rules that describe the set of changes that take place when these phonemes occur in words”. Each language employs a variety of speech sounds or phonemes. A phoneme is the smallest linguistic unit of sound that can signal the meaning. Phonemes are actually families of very similar sounds. Allophones or individual members of these families of sounds differ only slightly. Example: natural phonology by Stampe (1969) postulates that pattern of speech are governed by innate, universal set of phonological processes. Phonological rules govern the distribution and sequencing of phonemes with a language.

This organization is not the same as speech, which is actual mechanical act of producing phonemes. Without the phonological rules, the distribution and sequencing of phonemes would be random. Distributional rules describe which sounds can be employed in various positions in words. Sequencing rules also address the sound modifications made when two phonemes appear next to each other (Bauman – Waengler, 2000). When children understand that words can be divided into individual phonemes and that phonemes can be blended into words, they are able to use letter-sound knowledge to read and build words. As a consequence of this relationship, awareness is a strong predictor of later reading success. Researchers have shown that this strong relationship between phonological awareness and reading success persist throughout school days (Morais *et al.*, 1979).

Systematic language related differences and the fact that early forms of phonological awareness develop prior to literacy instruction suggest that experiences with oral language play an important role in developing phonological awareness. A number of determinants of the linguistic complexity of a spoken language- e.g., saliency, and complexity of word structures, phoneme position, articulatory factors- appear to influence phonological awareness development (Antony *et al.*, 2005). According to Jacobson (1988) “early reading is dependent on having some understanding of the internal structure of words, and explicit instruction in phonological awareness skills is very effective in promoting early reading. However, instruction in early reading-especially instruction in letter sound correspondence strengthens phonological awareness. Success in early reading also depends on achieving a certain level of phonological awareness. Instruction in phonological awareness is beneficial for most children and critical for others.

Bowey (2002) studied the socioeconomic status differences in preschool phonological sensitivity and first grade reading achievement. Two groups of 5 year old children, whose fathers’ occupation and education differed markedly were selected. They were given tests of performance IQ, receptive vocabulary and grammar, verbal working memory, phonological sensitivity, letter knowledge and reading ability. . At the end of first grade, academic achievement was assessed. Marked group differences were observed on most measures. Most differences remained after performance IQ effects were controlled. When general verbal ability effects were controlled, differences in phonological sensitivity and word-level reading and arithmetic achievement remained. When phonological sensitivity effects were also controlled, differences remained only in arithmetic performance. Overall, the results are consistent with the view that socioeconomic status differences in word-level reading achievement are mediated partly through pre-existing differences in phonological sensitivity. Abhishek (2009) studied the phonological awareness in successive bilinguals, in grade I and grade II, who had Kannada as their native language and learnt English as part of their academics and their performance was compared with the performance of monolinguals who had Kannada as their native language and were exposed to Kannada itself at school also. The results revealed that Bilingual advantage is evident for both grade I and grade II (more for grade I). Though Kannada and English are phonologically different, Bilingual advantage effect was seen, which can be attributed to the better meta- linguistic skills in Bilinguals.

A series of studies were conducted by Prema (1998) (Kannada), Akhila and Prema (2000) (Tamil), and Swaroopa and Prema (2001) and Seetha and Prema (2002) (Malayalam) to examine the influence of script specific features of alphabetic languages such as those of English or Kannada, Tamil, and Malayalam- the three South Indian Dravidian languages having semi-syllabic script. Akhila and Prema (2000) reported that the development of rhyming skills in Tamil was not found to parallel syllable deletion as seen in Kannada language (Prema, 1998). On the other hand, Swaroopa and Prema (2001) and Seetha and Prema (2002) found that rhyming and alliteration were potential indicators for adequate reading skills in Malayalam language. From the above literature, it is clear that there exists a relation between socioeconomic status, age, and phonological awareness. Several studies have indicated that SES and phonological awareness are related, but not many studies in this area have examined the possibility that age moderates this relation (McDowell, Goldstein, 2007) i.e., that the effect of SES on phonological awareness is different at different ages, especially in Malayalam language. In this context, the present study was proposed to study the phonological awareness in different socio-economic status and age groups in Malayalam speaking children using the tasks of phonological awareness such as syllable discrimination, rhyme judgement, rhyme production, word segmentation, syllable counting, syllable blending, initial syllable stripping and final syllable stripping. Several researchers (Adams, 1990; Bradley and Bryant, 1983; Bruce, 1964; Perfetti, 1987; Lundberg, Olofsson and Wall, 1980; Wagner, Torgesen and Rashotte, 1994) have assessed syllable discrimination ability, rhyming skills, and syllable awareness skills to find out the earliest predictors of reading skills. Since Malayalam language is semi- syllabic in nature and as children develop syllabic skills prior to phonemic skills, considering the age range of the subjects, syllabic level tasks were selected.

METHODS

The study was carried out in the following phases:

- Subject selection
- Test material
- Data collection
- Data analysis

Phase 1: Subject selection

The present study was designed to quantitatively analyse the phonological awareness in children belonging to different socioeconomic status (mid and high) and age groups (3 to 7 years).

Subject selection criteria were as follows and those subjects who met these criteria were included for the study.

- Subjects who had Malayalam as their mother tongue.
- Subjects who had normal hearing sensitivity.
- Subjects who had normal intelligence.
- Subjects who had no behavioural problems.
- Subjects who had an average or above average academic performance.
- Subjects who did not have any history of speech and language problems.

- The subjects, who were found normal on an informal screening of speech and language was carried out by qualified Speech Language Pathologist using general conversation, were included for the study.
- A questionnaire was filled by the parents and teachers, regarding the socio economic status and academic performance, respectively (questionnaire given in appendix 1), for each child, prior to selection. Depending on stated criteria, the subjects were grouped into mid and high socio economic status accordingly.

Based on the above stated criteria, a total of 480 school going children were selected for the study. They were selected on the basis of the questionnaire filled by parents and teachers. Out of them 240 subjects were attending kindergarten and rest of them were attending Grade I and Grade II. Children from private schools are selected for the study because the annual fee and the educational standards of these schools were higher compared to the Government school, and could be afforded only by parents from high socio-economic status. Children were also selected from Government schools, where the annual fee is very less, and assuming children from mid socio-economic status will be studying in these schools. The subjects were divided into four groups: Group I, Group II, Group III and Group IV based on age range and each group further divided into two subgroups again based on socio economic status: mid and high.

It is a task to assess the subject's ability to distinguish one syllable from another. It provides an index of the auditory perceptual ability of the subject. Here, the stimulus were ten sets of words arranged in the increasing order of complexity in terms of the number of syllables, i.e., from bi-syllabic to multisyllabic. Each set consisted of three words out of which two words shared the same initial syllable and one word with a different initial syllable. The stimuli was presented orally by the examiner and the subjects had to perform the 'odd one out' by choosing the word which has a different initial syllable.

Task II: Rhyming skills

This provides information about the child's ability to detect similar and dissimilar sounding words and their ability to produce words which sound similar to the target word. The rhyming skills were assessed under the domains of rhyme judgement and rhyme production.

Rhyme Judgement

The stimuli consist of five pairs of bi-syllabic words. Out of these, three pairs were rhyming words and two pairs were non rhyming words. The word pairs were presented orally in random and the subjects had to judge whether the words rhymed or not.

Table 1. Distribution of subjects in each Groups and Subgroups

GROUPS	AGE RANGE							
	GROUP I		GROUP II		GROUP III		GROUP IV	
	3-4 years		4-5 years		5-6 years		6-7 years	
S E S	Males	females	Males	Females	Males	Females	Males	Females
MIDDLE	30	30	30	30	30	30	30	30
HIGH	30	30	30	30	30	30	30	30

Table 2. Mean Percentage scores across age groups in mid and high socio economic status

SKILLS	MID SOCIO-ECONOMIC STATUS				HIGH SOCIO-ECONOMIC STATUS			
	3-4 YEARS	4-5 YEARS	5-6 YEARS	6-7 YEARS	3-4 YEARS	4-5 YEARS	5-6 YEARS	6-7 YEARS
SD	52.66	58.99	68.33	71.83	56.83	94.16	97.00	98.49
RJ	52.66	59.99	71.33	77.33	57.66	75.5	89.33	96.66
RP	52.16	59.33	64.66	73.99	55.00	71.99	75.33	94.33
WS	41.16	45.66	67.83	70.00	52.83	58.99	97.83	100.00
SC	53.33	67.99	69.66	74.33	71.33	77.16	97.66	99.33
SB	45.83	48.66	66.16	70.99	65.99	57.99	96.83	98.66
ISS	41.66	57.99	66.33	70.00	42.33	56.66	99.66	100.00
FSS	36.66	53.49	57.99	67.99	44.66	64.33	96.66	98.33

SD- syllable discrimination
 RJ- rhyme judgement
 RP- rhyme production
 WS- word segmentation
 SC- syllable counting
 SB- syllable blending
 ISS- initial syllable stripping
 FSS- final syllable stripping.

Phase 2: Test material

The test material was selected from the test developed by Lakshmi (2009) which was designed to assess the phonological awareness skills of Malayalam speaking children only at the syllable level. The tasks and activities which included were as follows.

Task I: Syllable discrimination

Rhyme production

The stimulus for this task consisted of five bisyllabic words which were presented one after the other. The subjects had to listen and then produce a rhyming word.

Task III: Syllable awareness skills

Syllable awareness skills were assessed to find out the subject's ability to manipulate syllables within words. As quoted in the review, it had been concluded from several studies that children can detect or manipulate syllables before they can detect or manipulate smaller intra syllabic word units. Syllable awareness skills were assessed under four sub tasks. They are syllable counting, syllable segmentation, syllable blending and syllable deletion tasks.

Word segmentation task

It is to assess the ability of the subject to segment words into their constituent syllables. The stimuli were consisting of ten words arranged in increasing order of complexity, i.e., from bisyllabic to multisyllabic words. The words were presented orally by the examiner and subjects were asked to segment the words into the constituent syllables.

Syllable counting task

This task taps the subject's ability to count the number of syllables in a target word. The stimulus for the task consisted of 10 words which were arranged in the increasing order of complexity, i.e., from bi syllabic to multisyllabic words. The words were presented orally by the examiner and subjects were asked to count the number of syllables in the words.

Syllable blending task

It is used to assess the subjects ability to blend the given syllables and form a complete word. The stimuli were consisting of ten items such that each of them consists of syllables when put together form words. The stimuli were arranged in such a way that, when combined, they form words in the increasing order of complexity. The subjects were asked to blend the syllables which were presented orally by the examiner and to form the actual word.

Syllable stripping task

This task was used to assess the subject's ability to delete a part (syllable) of the word and thereby combine the rest of the word. As evident from the literature, children can detect or manipulate onsets and rimes before they can detect or manipulate individual phonemes within intra syllabic word units. The syllable stripping skills were assessed under the two domains of initial syllable stripping and final syllable stripping.

Initial syllable stripping

This task was used to assess the child's ability to detect and separate the onset from the rime. The stimuli consisted of five words arranged in an increasing order of complexity from bi-syllabic to multisyllabic words. The stimuli were presented orally and the subjects were asked to delete the initial syllable and tell the rest of the word.

Final syllable stripping

This task was used to assess the child's ability to detect and separate the final syllable from the whole word. i.e., it measured the final syllable awareness. The stimuli consisted of five words arranged in an increasing order of complexity from bi-syllabic to multisyllabic words.

The stimuli were presented orally and the subjects were asked to delete the final syllable and tell the rest of the word.

Phase 3: Data collection

Collection of data involved the following steps.

Step 1: A classroom which was away from the distractive noisy environment of the school was selected for the purpose of testing the children.

Step 2: The subjects were seated comfortably on a chair opposite to the investigator across the table.

Step 3: To get the co operation from the subject for testing, rapport was built by talking about daily activities of the child, games which he/ she likes etc. Appropriate social and verbal reinforcements were given before administration of the tasks. Each of the tasks cited above were preceded by demonstration using three examples after which the original stimuli were presented.

Step 4: The instructions were given in Malayalam

Step 5: Online scoring method was adopted. For every correct answer, a score of one (1) point was given and a score of zero (0) point was given for wrong answer.

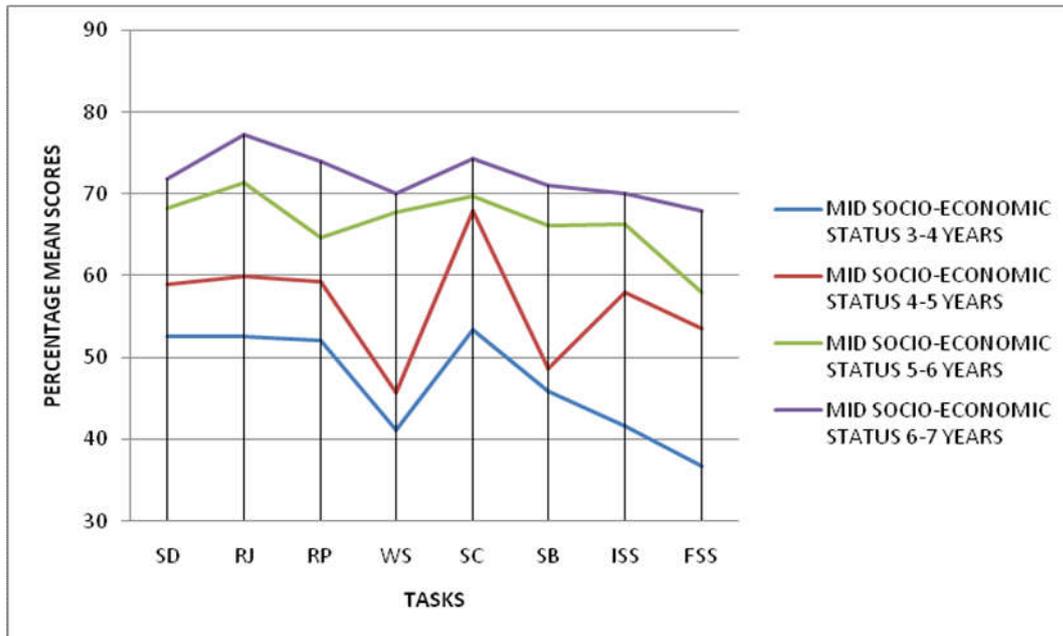
Step 6: When the child was not able to understand the instructions given by the investigator, the help of teacher was taken in building rapport with the child and instructions were repeated and then the test was carried out by presenting the stimulus one by one. And the scores were noted for each task performance. Thus the test was carried out in similar manner for all the tasks, for each child from mid and high socio-economic status and from different age groups.

Phase 4: Data analysis

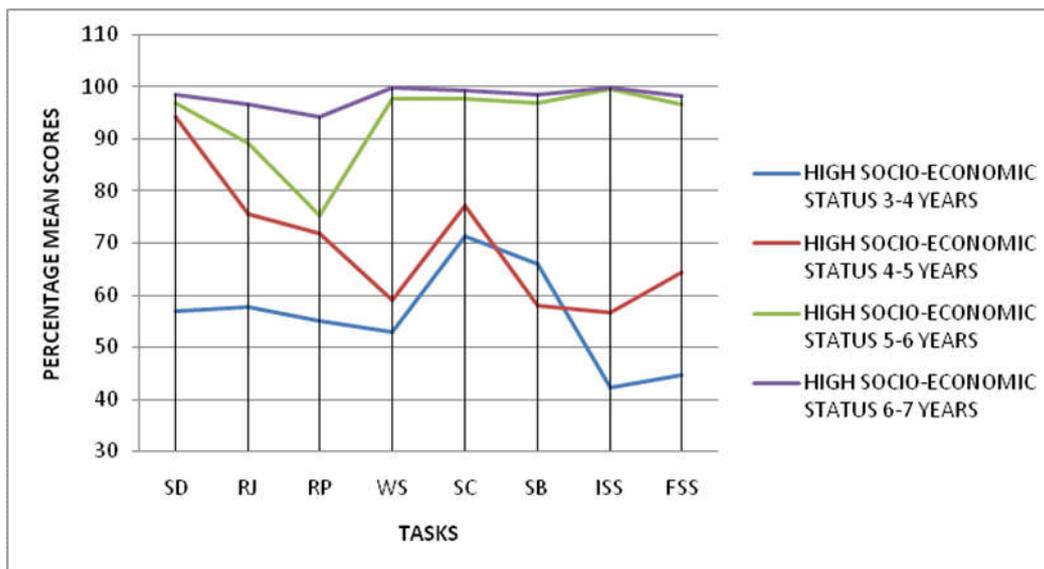
The data obtained from each group and socio-economic statuses were subjected for both descriptive and inferential statistics using SPSS (version 10). Comparison of the data was carried out using ANOVA. Scheffe post hoc test has been performed to isolate the source of significance.

RESULTS AND DISCUSSION

The statistical analysis of the data was carried out using SPSS (version 16.0) software. The mean and standard deviations were obtained for different age groups, socioeconomic groups and genders for different tasks, to assess the phonological awareness using ANOVA (Analysis of Variance). Post-hoc analysis was done for the scores which had significant difference. Description of results are given and discussed. An inspection of the table 2, helps in inferring that the scores of the subjects for each of the tasks increased on par with the age in mid and high socio-economic status. The subjects of 3-4 years scored the least in both mid and high socio-economic status and the subjects of 6 -7 years scored the maximum in all tasks in both high and mid socio-economic status. It was noted that the order of the acquisition of skills varies depending upon the nature of the task. In both mid and high socio-economic status, the subjects of 3-4 age range scored the highest in syllable counting task which may therefore be considered as the easiest among the tasks.



Graph 1. Showing Mean percentage scores across grades for mid SES group



Graph 2. Showing Mean percentage scores across grades for high SES group

The least scores were obtained for syllable stripping tasks irrespective of the socio-economic status. The nature of acquisition suggests that acquisition of individual skills is not independent of one another. It was noted that rhyme judgement skill, which is the earliest acquired skill, approximated the maximum scores as the age increased in mid socio-economic status. Word segmentation and syllable blending were the two other tasks for which the performance of the subjects from 3-4 years and 4-5 years were far behind the others in mid socio-economic status. Whereas, in high socio economic status, the subjects from 3-4 years scored less for word segmentation and rhyme production tasks and subjects from 4-5 years scored less for word segmentation and syllable blending tasks. In the present study, no clear cut trend was found to be followed in the pattern of acquisition of skills. The scores of the subjects on individual skills varied as the grades increased.

As shown in table 17, it could be observed that, the subjects of 3-4 years scored the lowest for final syllable stripping task (36.66%) in mid socio-economic status and for initial syllable stripping task (42.33) in high socio-economic status. They scored highest in syllable counting task i.e., 53.33% in mid socio-economic status and 71.33% in high socio-economic status. The subjects in the age range of 4-5 years scored the lowest in word segmentation task (45.66%) in mid socio-economic status and for initial syllable stripping task (56.66%) in high socio-economic status. In mid socio-economic status children, the scores for word segmentation is followed by syllable blending (48.66%), final syllable stripping (53.49%), initial syllable stripping (57.99%), syllable discrimination (58.99%), rhyme production (59.33%), rhyme judgement (59.99%) and finally the highest score for syllable counting (67.99%). Similarly in high socio-economic status children, the scores for initial syllable stripping is followed by syllable

blending (57.99%), word segmentation (58.99%), final syllable stripping (64.33%), rhyme production (71.99%), rhyme judgement (75.55%), syllable counting (77.16%) and the highest score is for syllable discrimination (94.16%). In 5-6 year old children from the mid socio-economic status, it was found that rhyme judgement is the easiest task because it has got the highest score of 71.33% and the lowest score, i.e., 57.99% is for final syllable stripping task. In between these two comes the rhyme production (64.66%), syllable blending (66.16%), initial syllable stripping (66.33%), word segmentation (67.83%), syllable discrimination (68.33%) and syllable counting (69.66%). Similarly, children from high socio-economic status in the age range of 5-6 years scored highest for initial syllable stripping task with a score of 99.66% and lowest for rhyme production task with a score of 75.33%. In between these two tasks, comes the rhyme judgement (89.33%), final syllable stripping (96.66%), syllable blending (96.83%), syllable discrimination (97%), syllable counting (97.66%) and word segmentation (97.83%). Mid socio-economic status children, in the age range of 6-7 years scored the lowest score for final syllable stripping (67.99%) and it is followed by word segmentation and initial syllable stripping both having 70% score and then syllable blending (70.99%), syllable discrimination (71.83%), rhyme production (73.99%), syllable counting (74.33%) and the highest in rhyme judgement task (77.33%). Similarly, high socio-economic status children in the same age range scored highest in initial syllable stripping and word segmentation task, both having 100% scores. It is then followed by syllable counting (99.33%), syllable blending (98.66%), syllable discrimination (98.49%), final syllable stripping (98.33%), rhyme judgement (96.66%) and the least scores for rhyme production (94.33%). Therefore from the above results, it can be observed that, there was no much difference in the scores of male and female children in all the age groups in both high and mid socioeconomic status. This finding is supported by Souza *et al.*, (2009) and Lakshmi (2009) also.

There is a clear cut increase in the scores of the subjects as observed with an increase in age, in both mid and high socioeconomic status. This can be attributed to the development of the skills which is dependent on the child achieving explicit or conscious control over the linguistic structures used for producing and comprehending speech. Goswami (2001) and Gombert (1992) describes these metalinguistic skills as developing in response to external factors such as direct teaching about the sounds of language or acquisition of literacy. Children from high socioeconomic status obtained higher score than those from mid socioeconomic status in all the tasks considered for the study. Emerging body of literature indicates that children entering the schools in areas of low socio economic status (SES) have delayed written word recognition and are consistent with poor phonological awareness (e.g., Bowey, 1995; Duncan and Seymour, 2000; Raz and Bryant, 1990). Such disadvantage, experienced during the first year of school, can have long-term educational implications. Socially disadvantaged children enter kindergarten from family backgrounds with one or more factors that might affect their skills and knowledge (US Department of education, 2001). The factors include: living in a single parent household, living in poverty, having a mother with low education, low familial literacy and poor nutrition. Children from higher socio-economic status backgrounds outperform children from lower socio-economic status backgrounds. Bird *et al.*, 1995; Lonigan *et al.*, 1998; Mc

Dowell, Lonigan and Goldstein, 2007, reported similar results with exceptions in rhyme oddity within three year old age group. These findings were consistent with results of other studies by Bowey *et al.*, (1995). Hart and Risely (1995), found in their longitudinal investigation of 42 children, from 10 months to 3 years of age, that children, from 10 months to 3 years of age, that children from higher income families had larger, more robust, and faster growing vocabularies than children from lower income families. Mc Dowell *et al* (2007) studied the relations among socioeconomic status, age and predictors of phonological awareness on 700 participants between two and five years of age. Participants were identified as being from homes of lower or higher socio economic status (SES) based on preschool funding source, and they completed two measures of vocabulary, eight measures of phonological awareness, and two measures of speech sound accuracy. Results indicated that SES, age, speech sound accuracy, and vocabulary each contributed unique variance to the prediction of phonological awareness. Age amplified the relation between speech sound accuracy and phonological awareness and between SES and phonological awareness but not between vocabulary and phonological awareness. Narasimhan, Deepthi, Akshatha, Bilvasree (2009) studied the effect of socioeconomic status on the phonological awareness on 20 native Kannada speaking children within the age range 6 to 14 years. Two groups were made; 1 group with 10 normal children from lower socio economic status and other with 10 normal children from higher socio-economic status. 'Test of learning disability' in Kannada which has seven subtests to assess phonological awareness was used. Results revealed high scores for higher socio-economic status children and lower scores were obtained by lower socio economic status children. There was a significant difference in terms of performance in all tasks except, syllable oddity (final) task. It was evident from the results that, children from lower socio economic status performed below than the children from higher socio economic status.

Research has also demonstrated that poverty can have negative effects on the amount of home literacy a child experiences (Baker, Mackler, Sonnenschein *et al.*, 1997) and on phonemic awareness ability (Nittrouer, 1996). In a study of the relationship between speech perception and phonemic awareness, Nittrouer (1996) examined differences in performance between four groups of second – grade students who varied in the amount of linguistic experience they had received during their preschool years. Three of the groups of children were presumed to have limited linguistic experience as a result of poverty (Group I), chronic otitis media (Group II), and both conditions (Group III). The fourth group, a control group, had experienced none of these conditions. The students were given multiple tasks of phonemic awareness. Results indicated that the children with histories of otitis media (Group II) performed more poorly than the control group on phonemic awareness tasks, and low-income students (Group I) performed even more poorly. Children affected by both poverty and otitis media (Group III) performed no differently than children from the low income group (Group I). Goswami and Bryant (1990) and Goswami (2003) have argued that a difference between phonological tasks in their relation to reading arises from a developmental progression in children's ability to recognize and manipulate sounds. They propose that awareness of syllable and the sub-syllabic units of onset and rime arise early in development before children learn to read. In contrast, they also proposed that awareness of phonemes as

units of speech within words only develops later, possibly as a consequence of having learned to read an alphabetic script. As the subjects were receiving formal education in regional language which is semi-syllabic in nature, no information was gathered about the development of awareness of phonemes as a unit of speech.

Implications of the study

It provides novel information regarding the role that age and socioeconomic status plays in developing phonological awareness. It was observed from the study that as the age of the subjects increases, their phonological awareness also increases. And the children from high socioeconomic status scored higher than those from mid socioeconomic status. It adds to existing literature regarding the relations among age, socioeconomic status and phonological awareness. There are studies in literature regarding the phonological awareness at different age groups and socioeconomic status. But not much studies are carried out in Malayalam speaking children. So, this study adds to the literature. It also helps to understand how age moderates the relation between socioeconomic status and phonological awareness. Studies have indicated that socioeconomic status and phonological awareness are related, but less studies have examined the possibility that age moderates this relation (McDowell and Goldstein, 2007), i.e., the effect of socio-economic status on phonological awareness is influenced by age.

Summary and Conclusions

Metalinguistic awareness may be defined at the general level as the ability think about and reflect upon the nature and functions of language (Pratt and Grieve, 1984). According to Pratt and Grieve (1984), phonological awareness is the sensitivity to the segmental nature of speech, an understanding that spoken language comprises of discrete units ranging from entire words and syllables to smaller intra-syllabic units of onsets, rimes and phonemes. The present study was aimed at finding the phonological awareness in different (mid and high) socio-economic status and age groups (three to seven years) of children. A total of 480 school going children were selected for the study. Each age group consisted of 120 subjects, 60 from mid and high socioeconomic status each. The subjects in each socioeconomic status group were again divided into 30 males and 30 females. The medium of instruction at school was Malayalam for Government school and English for private schools. The study was done under four stages, i.e., Subject selection, Test material, Data collection and Data analysis.

Considering the semi-syllabic nature of the language and the age range of the subjects, the skills were assessed at the syllabic level and the domains chosen for assessment were Syllable Discrimination ability, Rhyming skills and Syllable Awareness skills. Rhyming skills assessed both rhyme judgement and rhyme production. Syllable awareness skills consisted of sub-skills such as word segmentation, syllable counting, syllable blending, initial syllable stripping and final syllable stripping. The test material was selected from the test developed by Lakshmi (2009) which was designed to assess the phonological awareness skills of Malayalam speaking children only at the syllable level. The data obtained from each group and socio-economic statuses were subjected for both descriptive and inferential statistics using SPSS (version 10).

Comparison of the data was carried out using ANOVA. Scheffe post hoc test performed to isolate the source of significance.

Comparison between male and female children

- **Syllable discrimination:** All the groups in the mid and high socioeconomic status showed no statistically significant difference between genders.
- **Rhyme judgement:** No significant difference was obtained for all the mid and high socioeconomic groups between genders.
- **Rhyme Production:** There was no statistically significant difference between male and female children in all the groups studied i.e., males and females of mid and high Socioeconomic status.
- **Word Segmentation:** No significant difference was obtained for all the age groups in mid and high socioeconomic status, between genders.
- **Syllable counting;** No statistically significant difference was obtained between males and females of all the groups considered for the study from both mid and high socioeconomic status.
- **Syllable Blending:** No statistically significant difference between all the groups considered for the study from both mid and high socioeconomic status.
- **Initial Syllable Stripping:** The statistical analysis showed no statistically significant difference for all the groups studied from mid socioeconomic status. All the groups from high SES also did not show significant difference, except group II.
- **Final Syllable stripping:** The statistical analysis showed no statistically significant difference for all the groups studied from mid socioeconomic status and high socioeconomic status.
- In summary, it can be concluded that there was no significant difference between genders for both mid and high socioeconomic groups, for most of the tasks assessed.

Comparison across age groups

- **Syllable Discrimination:** Significant difference was obtained across groups for females from mid socioeconomic status whereas in high socioeconomic status, significant difference was obtained across groups for both males and females.
- **Rhyme judgement:** No significant difference was obtained across age groups for both males and females from mid socioeconomic status. In high socioeconomic status children showed a significant difference.
- **Rhyme production:** No significant difference was obtained across age groups for mid socioeconomic group children and high socioeconomic group children obtained significant difference across groups.
- **Word Segmentation:** In both mid and high socioeconomic groups, there was significant difference across age groups for both genders.
- **Syllable counting:** There was significant difference across age groups for both males and females in both mid and high socioeconomic group.
- **Syllable Blending:** There was significant difference across age groups for both genders in mid and high socioeconomic status.

- **Initial Syllable Stripping:** Significant difference was obtained across age groups in both mid and high socioeconomic groups.
- **Final Syllable Stripping:** No significant difference was obtained across age groups for mid socioeconomic status, for both genders. High socioeconomic group obtained significant difference across age groups for both genders.
- So, it can be concluded from the above study that there was significant difference across age groups for most of the skills assessed, for both genders.

Comparison of mid and high socioeconomic status children

- **Syllable Discrimination:** There was significant difference between mid socioeconomic status and high socioeconomic status, for all the age groups, except for group I.
- **Rhyme judgement:** Significant difference was present between mid and high socioeconomic status for males of all the age groups and no significant difference was obtained for females.
- **Rhyme Production:** Statistically significant difference was obtained for group II and group IV of mid and high socioeconomic status. No significant difference was obtained between mid and high SES for group I and group III.
- **Word segmentation:** Significant difference was obtained for group I, group III and group IV of mid and high, and not for group II in both genders.
- **Syllable Counting:** Significant difference was obtained between mid and high socioeconomic status for all the groups.
- **Syllable Blending:** Significant difference was obtained between mid and high socioeconomic status for both genders in group III and group IV and no significant difference was obtained for group I and group II for both genders.
- **Initial Syllable Stripping:** There was significant difference between mid and high socioeconomic groups for both genders in all the groups studied except for group I males.
- **Final Syllable Stripping:** There was significant difference between mid and high socioeconomic groups for both genders in all the groups studied.

So, it can be concluded from the above findings that there was significant difference between mid and high socioeconomic status children in most of the tasks assessed, for both genders. Upon the analysis, the results obtained can be concluded as:

- The scores of the subjects for each of the tasks increased with an increase in age.
- The scores of the subjects from high socio economic status were higher when compared to scores of subjects from mid socio-economic status.
- No significant difference was found between the performance of males and females were observed for all groups.

Limitations of the study

- Children only up to seven years were considered for the study.

- Study was carried out only on normal population.
- Skills were assessed only at syllabic level.

Recommendations for further studies

- The study can be extended to clinical population also.
- The number of skills considered for the study may be increased.
- Mode of presentation of the stimulus and the response elicitation may be varied.

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