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**Assessment of Basic Concept Knowledge of Children from Differing
Socio-Economic Status Homes**

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Abstract

In the field of education, research suggests that socioeconomic status (SES) influences vocabulary development and academic achievement. Children from high SES backgrounds tend to score better on standardized vocabulary tests than children from low SES backgrounds; however, to date only general vocabulary measures have been utilized. Basic concepts, a specific subset of vocabulary, serve as the foundation upon which children build their conceptual knowledge. For this study, two groups of preschool children (one from high SES homes and one from low SES homes) were administered the Bracken Basic Concept Scale - Third Edition (BBCS:3). The purpose of this study was to determine if children from higher SES homes do, in fact, have a higher knowledge of basic concepts than their lower SES peers. An independent samples *t*-test was used to statistically analyze the differences between test scores of the two groups (high and low SES). Results revealed that children from higher SES homes scored significantly higher on the BBCS:3 than their peers from lower SES homes. Implications of this study are discussed.

Keywords

basic concepts, socioeconomic status, preschool

In the field of education, research has been conducted to suggest that socioeconomic status (SES) influences vocabulary development and academic achievement (Sirin, 2005). SES can be defined as the social class assigned to a family based on parental income and education that influences the opportunities provided to the family. The lower the income of the family, the lower scores a child will receive on academic work and vice-versa with higher income families (Sirin, 2005). Barry (2005) states that the home environment is the child's primary socialization agent and can impact the child's willingness to learn in school as well as his/her goals for the future. Vocabulary knowledge is an essential component to later academic achievement and it is important to identify the specific vocabulary words that are essential to preschool success. Basic concepts are vocabulary words that have been found to serve as the foundation upon which children build their education. If children are identified as qualifying in the low SES category, these children are at risk for demonstrating lower academic skills, including in the area of basic concept knowledge.

Several studies have identified students from low SES homes as a population of children at risk for low vocabulary skills. One study examined the scores of the Peabody Picture Vocabulary Test (PPVT-III) (Dunn & Dunn, 1997) from 533 children from low SES homes (Dickinson, McCabe, Anastasopoulos, Peisner-Feinberg & Poe, 2003). The mean PPVT-III score for was 87 (SD = 15), which falls at the 19th percentile for national norms. This allows for the conclusion that SES most likely played a large role in the students scoring lower than the average national norms. In another study conducted by Horton-Ikard and Weismer (2007), African

American toddlers from low-SES homes performed significantly poorer than African American children from middle-SES homes on standardized receptive and expressive vocabulary tests. While both studies found that children from low SES homes demonstrated lower vocabulary skills, only general vocabulary tests were used.

One subset of vocabulary words important for preschool students to understand are basic concepts. Basic concepts represent “labels; . . . basic in that they represent the most rudimentary concepts in specific categorical areas” (Bracken, 1984, p. 2). These categorical areas include positional words (e.g., up, down, beside, underneath), quantities (e.g., enough, full), sequences), and relationships (i.e., between objects social awareness (e.g., afraid, resting). These basic concepts are often found in directional words that the child encounters in classroom activities. The problem with these directional words is that they are often taken to be “common knowledge”, or knowledge gained through life experiences. Children are often expected to understand these terms without specific instruction; however, it is unclear in the current research if basic concept knowledge differs for children from different SES (low and high) homes.

Children are expected to respond appropriately in the classroom and in testing environments, but if a child does not understand basic conceptual knowledge, he/she will not understand how to complete such tasks. When children cannot complete tasks and/or rank compatibly with age-matched peers, it reflects poorly on their scholastic abilities; however, these deficits could occur from simply

not understanding the directions. Thus it is important to study basic concepts and how “basic” they truly are to children in opposite groups of socioeconomic classes.

Formal assessments for basic concepts are available. Of these assessments, the Bracken Basic Concept Scale - Third Edition (BBCS:3) (Bracken, 2006) includes 308 basic concept terms, more basic concepts than any other available standardized test. In addition, the assessment includes a School Readiness Composite (colors, numbers, letters, sizes and shapes) and there are five additional subtests: direction, social awareness, texture/material, quantity, and time/sequence.

In conclusion, this study aimed to determine if SES (high and low) would affect the knowledge of basic concepts for two groups of preschoolers. It is predicted that the high SES preschool group would score significantly higher than children from the low SES preschool group.

Method

The BBCS:3 was administered to two groups of preschoolers. These two groups of participants included one group in a high SES preschool and one group in a low SES preschool. SES was determined by state median income level, family income and preschool attendance costs.

Participants

Forty-five students from the local Head Start program and one local independent preschool were recruited to participate in this study. Signed parental consent forms were obtained from all participants. The Bracken Basic Concept Scale—Revised (BBCS-3:R) (Bracken, 2006), was administered to all students. The

first group of participants included 30 students from a low SES preschool, which is one that requires a low income to qualify for attendance. Table 1 illustrates the highest income levels for families of different sizes that allow the child to attend the low SES preschool. The qualifying maximum income for the low SES preschool is \$24, 250 for a family of four (Parents in Community Action, Inc., 2015). The second group of participants included 15 students from a high SES preschool. Figure 1 shows the highest degree earned by one parent of a child tested from the high SES preschool. Figure 2 shows the combined household income of each student tested from the high SES preschool. Surveys were sent home for families to indicate income and highest amount of parental education. At least one parent in all families included in this study from the high SES preschool had at least a Bachelor's degree and both parents had a combined household income of \$50,000+. The median combined household income for the state of Arkansas in 2014 was \$40, 678 according to the 2013 United States Census; all of the families included in the high SES preschool had incomes above the median combined household income, while all families included in the low SES preschool had incomes below the state median combined household income.

Table 1. Highest income to qualify for low SES preschool by family size.

Family Size	Income
1	\$11,770
2	\$15,930
3	\$20,090
4	\$24,250
5	\$24,250
6	\$32,570
7	\$36,730
8	\$40,890

Figure 1. Highest degree earned by one parent in high SES preschool.

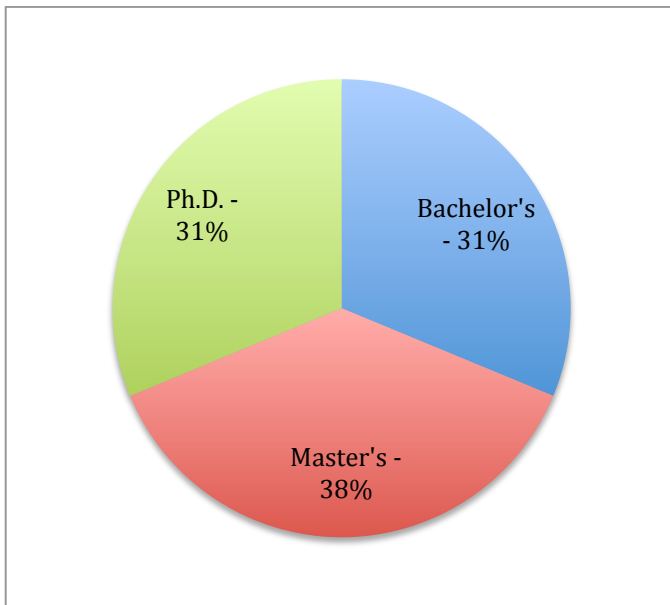
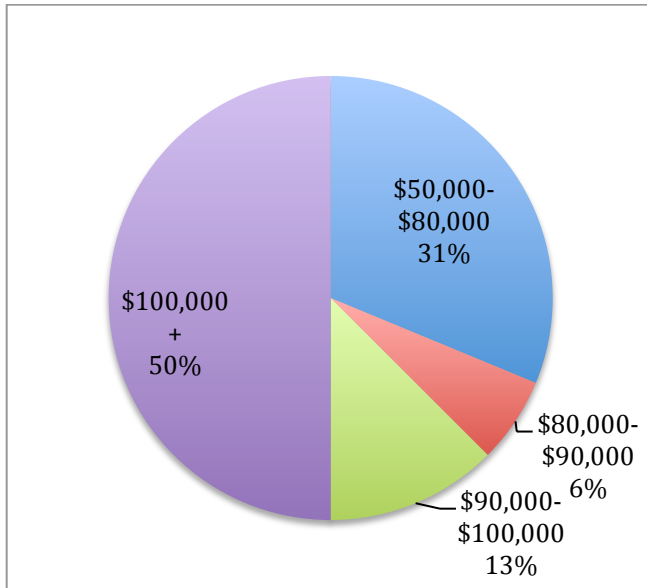


Figure 2. Combined household income in high SES preschool.



Procedures

Students in each of the different preschools were recruited to take part in the study. All participants turned in an informed consent approved by the Institutional Review Board. Both groups of preschool children were tested using the BBCS:3 (Bracken, 2006). Students were tested by trained graduate and undergraduate students in the Communication Disorders program supervised by a licensed speech-language pathologist. Since the BBCS:3 is a standardized measure of basic concepts, data can be compared to the available standardized norms.

Results

An independent *t*-test was used to compare the mean ages of students attending the low SES preschool program and students in the high SES preschool program. There was no significant difference between groups for age in months (*t*

[43] = 1.644, $p = .108$). Means and standard deviations are reported in Table 2. Thus it can be assumed any group differences are not influenced by the age of the participants.

Table 2. Means and standard deviations (SD) for age in months by group.

	Mean age (months)	Standard Deviation	Min / Max
Total (N = 45)	54.56	4.44	48 - 67
Low SES group (N = 30)	53.8	3.34	48 - 60
High SES group (N = 15)	56.01	5.9	49 - 67

The test scores from the BBCS:3 for both groups (high and low SES) were compared using an independent t -test. Results demonstrated that there was a significant difference by group ($t [43] = 5.755, p < .001$). Further analysis of standard scores by group revealed that the high SES group scored significantly higher on the basic concept standardized test than the low SES group. Means and standard deviations are reported in Table 3.

Table 3. Mean standard scores (SS) and standard deviations (SD) for BBCS:3 by group.

	Mean SS	SD	Min / Max
Total (N = 45)	94.42	18.33	62 - 127
Low SES group (N = 30)	85.97	14.70	62 - 118
High SES group (N = 15)	111.33	12.22	91 - 127

Discussion

This study was designed to examine the basic concept knowledge of children from low and high SES homes. A standardized assessment was used to measure basic concept knowledge. Findings and implications are discussed. As predicted, children from the higher SES classroom scored significantly higher than children from the lower SES classroom. Results are discussed below.

Data was collected from children attending two types of preschool programs – one that had a maximum income requirement to qualify for services by household members (e.g., a household of four people could report no more than \$24,250 in annual income) and a local preschool program. To control for income at the local “high SES” preschool program, surveys were sent home with parents. All children included in the study from the high SES preschool had at least one parent who had obtained at least a Bachelor’s degree. This reinforces the idea that the home environment serves as a motivator for a child to learn; children who come from families who are educated are more likely to be successful in the classroom. Although education status of the parents of children from the low SES preschool was not obtained, all combined household income levels of families whose children attended the low SES preschool were below the state average combined household income level. All families whose children attended the high SES preschool had incomes of at least \$10,000 above the state average combined household income level. The children from the higher SES homes are more likely to have higher vocabulary skills as evidenced by their higher knowledge of basic concepts. From this project, it was discovered that along with other aspects of educational status,

basic concept knowledge is also significantly impacted by a family's SES. With higher basic concept knowledge, children from higher SES homes will have an advantage on their lower SES peers when entering kindergarten and continuing on in their education. These students will be more likely to better understand directions, complete tasks and have a firmer foundation on which to build their education.

Limitations

Limitations from this study include the lack of information gathered from the low SES preschool families. Although data about income and parental education was gathered from the children enrolled in the high SES preschool, information about income for the low SES preschool families was taken from the qualifying income information. Since information about income and parental education was not obtained, unforeseen circumstances such as situational poverty, parents completing their education, etc. could be contributing factors for qualifying the child as "low SES". Another limitation includes only using one form of assessment to assess basic concept knowledge. Alternate forms of assessment are available to determine basic concept knowledge in preschoolers. Finally, the difference in classroom sizes was also a limitation. The low SES preschool had twice as many participants as the high SES preschool.

Future Directions

In the future, it would be beneficial to examine the differences in the subtests: School Readiness Composite (colors, numbers, letters, sizes and shapes), direction, social awareness, texture/material, quantity, and time/sequence and see how each subtest is affected by SES; perhaps some subtests are affected more than

others by SES. Another interesting future direction would be to examine what other demographic factors could be at play other than SES. Maternal education, dual language learning, etc. could also influence the child's knowledge of basic concepts. Last, it would be interesting to examine the differences in informal and formal measurements of basic concepts. Informal measures would allow the researcher to assess and monitor progress of basic concept knowledge in a preschool classroom instead of giving a one-time standardized assessment (which is time consuming).

Conclusion

In summary, the current study served to investigate the impact of SES on basic concept knowledge in preschoolers. It was found that SES does significantly impact basic concept knowledge, along with many other aspects of education. Students from higher SES homes will enter into their education with a firmer base on which to build than their peers from lower SES homes.

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