Influence of Socioeconomic Status on Visual Perception Skills among school going children aged 6-11 years

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KEYWORDS
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Abstract

Introduction: Socioeconomic status (SES), includes factors like parental education, occupation, and income that plays a significant role in shaping children's developmental outcomes, such as visual perception. Higher SES is associated with better visual perception skills due to access to enriched environments and resources, while lower SES can limit exposure to such opportunities, potentially affecting cognitive and sensory development. Understanding this relationship is crucial for creating equitable interventions to support children from diverse backgrounds.

Objectives: To explore the influence of socioeconomic status on visual perception skills in school going children aged 6-11 years.

Methods: A cross-sectional study was performed on 226 children aged 6-11 years were recruited from government schools in Kattankulathur through convenience sampling. Motor Free Visual Perception Test- fourth version (MVPT-4) and Modified Kuppuswamy Scale were used to evaluate visual perception, and socioeconomic status, respectively. Statistical analysis was carried out using SPSS version 26 through Kruskal Wallis test, Spearman Rank-Order correlation and regression analysis.

Results: The mean age of participants was 8.01±1.4 years. A statistically significant difference ($p<0.05$) was found across different SES based on education, occupation, income, and overall SES. Correlation analysis showed a positive relationship between MVPT-4 scores and the ages of participants within various socioeconomic groups, indicating that VP performance improves with age. Regression analysis further revealed that age could account for 0.04% of the variation in MVPT-4 scores for the lower, 26.4% for the lower middle, 35.3% for the upper and 47.7% for the upper middle class.

Conclusion: The study concludes that SES is a critical predictor of visual perception development. The visual perception scores differed among children in different socio-economic groups. Furthermore, the study concludes the need for awareness and early intervention for visual perception skills among lower socioeconomic groups.

Introduction

Socioeconomic Status (SES) comprises of attributes focused on quality of life and opportunities that are assigned to people within a society.[1] It not only encompasses income but also educational attainment, occupations, and subjective perceptions of social status and social class. It is also one of the important factors studied during child development.[1] SES is linked to a broad spectrum of health, cognitive, and socioemotional consequences in children, with its influence commencing before birth and extending throughout adult lives.[2] The parameters of SES, including parental education and occupation as well as family income are proposed to have a significant impact on child development.[3-5] This interest stems from the conviction that families with higher SES provide their children with a wide range of services, commodities, parental support, and social networks can positively impact their well-being. There is concern that many children from lower SES backgrounds have limited access to these resources and experiences, which may lead to developmental challenges.[6]

Children from wealthier families generally achieve better results in various neurocognitive testing when compared to middle and lower socioeconomic backgrounds.[7] A study[8] revealed that preschoolers from low-income households exhibit below-average visual perception and visual-motor integration skills and are more prone to failing visual screening assessments in comparison to their peers from higher-income families. This emphasizes the importance of accurately assessing young children's visual perceptual abilities, as these skills play a crucial role in their functional task performance and, consequently, their readiness for school.[9,10]

A range of sensory inputs influences children's visual perception development, and these inputs have connections to environmental factors such as economic status and educational level.[11-13] However, there is a scarcity of studies examining the influence of socioeconomic status on visual perception skills. A study[14] conducted in Ankara, Turkey, examined the impact of visual perception skills and socioeconomic status on 7–10-year-old school children, revealing a significant relationship between higher income levels, higher parental education, and visual perception skills. This study assessed and classified family income using guidelines from the Bulletin of the Confederation of Turkish Trade Unions and grouped parental education into three categories. Similarly, another study[15] explored this relationship in Malaysian preschool children using a semi-structured questionnaire to assess socioeconomic determinants. However, it is crucial to expand this research to different regions and populations. Specifically, similar studies are needed in India to investigate how socioeconomic factors, such as income and parental education, influence children's visual perception skills.

Problem Statement

Research in the Indian context could offer valuable insights into the relationship between socioeconomic status and cognitive development, enriching our understanding of these dynamics and potentially guiding targeted interventions to enhance children's educational and cognitive well-being in India. The present study utilized the Modified Kuppuswamy Socioeconomic Status Scale[16] (updated version 2023) to examine socioeconomic determinants specific to the Indian context. This scale is one of the most widely used measure to determine the SES in India as it depends on the consumer price index (CPI) which is released by the Labour Bureau, Government of India.

Therefore, the aim of the study was to explore the influence of socioeconomic status on visual perception skills in school-going children aged 6-11 years.

Research Question: Is there an influence of socioeconomic status on the visual perception skills of school-going children aged 6-11 years?

Methods

Ethical approval and sample

Ethical approval was obtained from the Institutional Ethical Committee of SRM Medical College Hospital & Research Centre, Kattankulathur (Ethical Approval No. 8494/IEC/2022). A cross-sectional study design was used to investigate the influence between socioeconomic status on visual perception. Two hundred and twenty-six (N=226) school-going children, aged 6-11 years, from government schools in Kattankulathur, Tamil Nadu, India were recruited for the study through non-randomized convenience sampling. Based on the information obtained by the teachers, children were excluded if they demonstrated cognitive, behavioral, or emotional difficulties and uncorrected visual impairments.

Sample Size Estimation

The sample size was estimated based on a study previously conducted (Abaoghu, H et al., 2018)[14] and f test.
f= 0.4 (effect size); α= 0.05; 1-β=0.95
N= 140 (minimum number of participants)
Data collected: N=226

Procedure

Informed written consent from parents and verbal assent from children was taken. Based on the estimated sample size, participants were distributed based on age and gender into five age groups. The Modified Kuppswamy Socioeconomic Status Scale was administered to parents to gather the socioeconomic data. Mother's education level, occupation and income were collected during data collection, but not used for analysis. Motor Free Visual Perception Test (MVPT-4) was administered to the children by the standard protocol recommended in the test manual to assess visual perception. The scores obtained from both measures were then compared and analyzed.

Measures

1. *Modified Kuppuswamy Socioeconomic Status Scale* [16,17]

The Modified Kuppuswamy Socioeconomic Status Scale is a commonly employed tool for assessing the socio-economic status in India. A modified version of the scale incorporated the education and occupation of the head of the family, along with the monthly per capita income. The scale is divided into three components: Education (7 levels); Occupation (10 levels); and Income (12 levels). The score ranges from 3-29, where <5 is lower (V), 5-10 is upper lower (IV), 11-15 is lower middle (III), 16-25 is upper middle (II), and 26-29 is upper (I) socioeconomic class.

2. *Motor Free Visual Perception Test- Fourth Edition (MVPT-4)* [18]

MVPT-4 evaluates an individual's visual-perceptual ability through motor-free domains for 4 through 80+ years for spatial relationships, visual discrimination, figure-ground, visual closure, and visual memory. A total raw score is only provided in this test, there are no subscale scores available. This test demonstrates an internal consistency of 0.80 and a test-retest reliability of 0.76. MVPT-4 exhibits good content validity, criterion validity (r=0.60) and construct validity.

Statistics

Data analysis was conducted using IBM Corp.s' software, IBM SPSS Statistics 26.0 version. Descriptive analysis such as frequencies and percentage were used to describe the demographic data. Non-parametric tests were chosen as the data did not meet the assumptions of normality, as determined by the Kolmogorov–Smirnov and Shapiro–Wilk test. The between

group analysis was performed using the Kruskal Wallis Test. To identify which specific levels were statistically significant, Bonferroni post hoc analysis was performed. Spearman's rank-order correlation was conducted to analyze the correlation between MVPT scores among different socioeconomic groups. Regression analysis was used to examine the relationship between one dependent variable (MVPT 4 scores) and one or more independent variables (age, socioeconomic class.

Alpha level of $p<0.05$ was considered to be statistically significant.

Results

A total of 226 participants were analysed of which 111 were females and 115 were males. The mean age of participants was 8.01±1.4 years. The participants were categorised into five socioeconomic classes, upper (n=2), upper middle (n=85), lower middle (n=66), upper lower (n=45), and lower (n=28) (table no. 1). Kruskal Wallis test revealed that here was a statistically significant difference between education level, occupation, income, and visual perception ($p <0.001$). Bonferroni post hoc analysis was conducted to reveal the pairwise comparison (table no. 2,3,4,5). Correlation analysis (table no. 6) was conducted to understand the relationship between socioeconomic status and visual perception. There was a very weak, positive correlation between MVPT 4 scores and age in lower class, which was found to be not statistically significant ($\rho = 0.123$, $p = 0.534$). A moderate, positive correlation between MVPT 4 scores and age in lower middle class was statistically significant ($\rho = 0.541$, $p < 0.001$). A strong, positive correlation between MVPT 4 scores and age in upper lower class was statistically significant ($\rho = 0.607$, $p < 0.001$). A strong, positive correlation between MVPT 4 scores and age in upper middle class was statistically significant ($\rho = 0.672$, $p < 0.001$). This signifies that as age increases the MVPT 4 score also increases. Correlation analysis was not computed for Upper Class as the sample size was two (n=2). Regression analysis (table no. 7) stated the R2 value shows the total variation in the MVPT 4 score as compared to age. Age could explain 0.04% variation for lower class, 26.4% variation for lower middle class, 35.3% for upper class and 47.7% for upper middle class in the MVPT 4 scores of the children. This means that as children get older, their MVPT-4 scores vary more with age in higher socioeconomic classes compared to lower socioeconomic classes.

Table No. 1 Demographic distribution of variables

Age	**n**	**Mean ± SD**
6.00-6.11 years	47	6.06 ± 0.191
7.00-7.11 years	45	7.42 ± 0.297
8.00-8.11 years	45	8.42 ± 0.202
9.00- 9.11 years	46	9.43 ± 0.226
10.00- 10.11 years	43	10.46 ± 0.263
Mean Age (6.00-10.11 years)	**226**	**8.01 ± 1.431**
Gender	**n**	**Percentage (%)**
Males	115	50.9
Females	111	49.1
Total (N)	**226**	**100**
Socioeconomic Class (Modified Kuppuswamy Socioeconomic Scale)	**n**	
Upper (I)	2	
Upper Middle Class (II)	85	
Lower Middle Class (III)	66	

Upper Lower Class (IV)	45
Lower (V)	28
Total (N)	**226**

Table No. 2: Comparison of Modified Kuppuswamy Scale (Education Level) with MVPT-4 scores

Modified Kuppuswamy Scale: Education Levels		**Mean ±SD**	**z value**	**p value**
Education level 1 comparison with other education levels **Mean ± SD (Level 1)** 18.86 ± 4.66	Level 2	20.14 ± 5.14	-0.561	1.000
	Level 3	26.00 ± 4.83	-1.822	1.000
	Level 4	22.54 ± 5.39	-2.123	.693
	Level 5	22.54 ± 5.39	**-4.238**	**.000**
	Level 6	30.50 ± 4.77	**-7.825**	**.000**
	Level 7	31.31 ± 3.69	**-7.382**	**.000**
Education level 2 comparison with other education levels **Mean ± SD (Level 2)** 20.14 ± 5.14	Level 3	26.00 ± 4.83	-1.382	1.000
	Level 4	22.54 ± 5.39	-1.067	1.000
	Level 5	22.54 ± 5.39	-2.777	.155
	Level 6	30.50 ± 4.77	**-5.326**	**.000**
	Level 7	31.31 ± 3.69	**-5.367**	**.000**
Education level 3 comparison with other education levels **Mean ± SD (Level 3)** 26.00 ± 4.83	Level 5	22.54 ± 5.39	-0.167	1.000
	Level 6	30.50 ± 4.77	-1.509	1.000
	Level 7	31.31 ± 3.69	-1.766	1.000
Education level 4 comparison with other education levels **Mean ± SD (Level 4)** 22.54 ± 5.39	Level 3	26.00 ± 4.83	0.865	1.000
	Level 5	22.54 ± 5.39	-2.387	.357
	Level 6	30.50 ± 4.77	**-6.250**	**.000**
	Level 7	31.31 ± 3.69	**-5.892**	**.000**
Education level 5 comparison with other education level **Mean ± SD (Level 5)** 26.41 ± 4.60	Level 6	30.50 ± 4.77	**-3.385**	**.015**
	Level 7	31.31 ± 3.69	**-3.515**	**.009**
Education level 6 comparison with other education level **Mean ± SD (Level 6)** 30.50 ± 4.77	Level 7	31.31 ± 3.69	-0.753	1.000

$p<0.05$, Bonferroni Post Hoc Analysis following Kruskal Wallis Test

Table No. 3: Comparison of Modified Kuppuswamy Scale (Occupation Level) with MVPT-4 scores

Modified Kuppuswamy Scale: Occupation Levels		Mean ±SD	z value	p value
Occupation level 2 comparison with other education levels **Mean ± SD (Level 2)** 18.38 ± 4.70	Level 3	25.03 ± 5.45	**-3.690**	**.008**
	Level 4	27.33 ± 6.40	**-3.407**	**.024**
	Level 5	23.88 ± 5.36	-1.952	1.000
	Level 6	25.57 ± 5.30	**-4.625**	**.000**
	Level 7	31.00 ± 5.29	**-5.038**	**.000**
	Level 8	30.12 ± 4.41	**-6.956**	**.000**
	Level 9	31.43 ± 3.91	**-8.978**	**.000**
	Level 10	29.50 ± 4.21	**-4.270**	**.001**
Occupation level 3 comparison with other education levels **Mean ± SD (Level 3)** 25.03 ± 5.45	Level 4	27.33 ± 6.40	-1.006	1.000
	Level 6	25.57 ± 5.30	-0.494	1.000
	Level 7	31.00 ± 5.29	-2.605	.331
	Level 8	30.12 ± 4.41	**-3.337**	**.031**
	Level 9	31.43 ± 3.91	**-4.666**	**.000**
	Level 10	29.50 ± 4.21	-1.966	1.000
Occupation level 4 comparison with other education levels **Mean ± SD (Level 4)** 27.33 ± 6.40	Level 7	31.00 ± 5.29	-1.280	1.000
	Level 8	30.12 ± 4.41	-1.296	1.000
	Level 9	31.43 ± 3.91	-1.905	1.000
	Level 10	29.50 ± 4.21	-0.818	1.000
Occupation level 5 comparison with other education levels **Mean ± SD (Level 5)** 23.88 ± 5.36	Level 3	25.03 ± 5.45	0.310	1.000
	Level 4	27.33 ± 6.40	1.033	1.000
	Level 6	25.57 ± 5.30	-0.616	1.000
	Level 7	31.00 ± 5.29	-2.275	.825
	Level 8	30.12 ± 4.41	-2.482	.470
	Level 9	31.43 ± 3.91	-3.124	.064
	Level 10	29.50 ± 4.21	-1.966	1.000
Occupation level 6 comparison with other education levels **Mean ± SD (Level 6)** 25.57 ± 5.30	Level 4	27.33 ± 6.40	0.737	1.000
	Level 7	31.00 ± 5.29	-2.400	.590
	Level 8	30.12 ± 4.41	-3.168	.055
	Level 9	31.43 ± 3.91	**-4.685**	**.000**
	Level 10	29.50 ± 4.21	-0.818	1.000
Occupation level 7 comparison with other education levels **Mean ± SD (Level 7)** 31.00 ± 5.29	Level 9	31.43 ± 3.91	-0.251	1.000
Occupation level 8 comparison with other education levels **Mean ± SD (Level 8)** 30.12 ± 4.41	Level 7	31.00 ± 5.29	0.263	1.000
	Level 9	31.43 ± 3.91	-0.787	1.000

Occupation level 10 comparison with other education levels **Mean ± SD (Level 10)** 29.50 ± 4.21	Level 7	31.00 ± 5.29	0.423	1.000
	Level 8	30.12 ± 4.41	0.257	1.000
	Level 9	31.43 ± 3.91	0.775	1.000

p<0.05, Bonferroni Post Hoc Analysis following Kruskal Wallis Test

Table No. 4: Comparison of Modified Kuppuswamy Scale (Income) with MVPT-4 scores

Modified Kuppuswamy Scale: Income Levels		**Mean ±SD**	**z value**	**p value**
Income level 1 comparison with other education levels **Mean ± SD (Level 1)** 18.79 ± 4.57	Level 2	25.75 ± 5.70	**-5.343**	**.000**
	Level 3	29.82 ± 4.60	**-8.287**	**.000**
	Level 4	29.74 ± 5.02	**-5.930**	**.000**
	Level 5	35.00	**-2.488**	.270
	Level 6	32.92 ± 3.30	**-6.895**	**.000**
	Level 10	28.50 ± 0.71	-2.019	.914
Income level 2 comparison with other education levels **Mean ± SD (Level 2)** 25.75 ± 5.70	Level 3	29.82 ± 4.60	**-3.916**	**.002**
	Level 4	29.74 ± 5.02	-2.518	.248
	Level 5	35.00	-1.512	1.000
	Level 6	32.92 ± 3.30	**-3.990**	**.001**
	Level 10	28.50 ± 0.71	-0.649	1.000
Income level 3 comparison with other education levels **Mean ± SD (Level 3)** 29.82 ± 4.60	Level 5	35.00	-0.860	1.000
	Level 6	32.92 ± 3.30	-1.742	1.000
Income level 4 comparison with other education levels **Mean ± SD (Level 4)** 29.74 ± 5.02	Level 3	29.82 ± 4.60	0.063	1.000
	Level 5	35.00	-0.861	1.000
	Level 6	32.92 ± 3.30	-1.525	1.000
Income level 6 comparison with other education levels	Level 5	35.00	0.322	1.000

Mean ± SD (Level 6) 32.92 ± 3.30				
Income level 10 comparison with other education levels **Mean ± SD (Level 10)** 28.50 ± 0.71	Level 3	29.82 ± 4.60	0.264	1.000
	Level 4	29.74 ± 5.02	0.233	1.000
	Level 5	35.00	0.863	1.000
	Level 6	32.92 ± 3.30	0.951	1.000

p<0.05, Bonferroni Post Hoc Analysis following Kruskal Wallis Test

Table No. 5: Comparison of Modified Kuppuswamy Scale (Socioeconomic Class) with MVPT-4 scores

Modified Kuppuswamy Socioeconomic Scale: Socioeconomic Class		**Mean ±SD**	**z value**	**p-value**
Lower **Mean ± SD** 18.75 ± 4.59	Upper Lower	22.62 ± 5.95	-2.251	.244
	Lower Middle	25.86 ± 5.45	**-4.464**	**.000**
	Upper Class	28.50 ± 0.71	-2.004	.451
	Upper Middle	31.12 ± 4.01	**-8.627**	**.000**
Upper Lower **Mean ± SD** 22.62 ± 5.95	Lower Middle	25.86 ± 5.45	2.405	.162
	Upper Class	28.50 ± 0.71	1.279	1.000
	Upper Middle	31.12 ± 4.01	**-7.257**	**.000**
Lower Middle **Mean ± SD** 25.86 ± 5.45	Upper Class	28.50 ± 0.71	-0.640	1.000
	Upper Middle	31.12 ± 4.01	**-5.321**	**.000**
Upper **Mean ± SD** 28.50 ± 0.71	Upper Middle	31.12 ± 4.01	-0.578	1.000

p<0.05, Bonferroni Post Hoc Analysis following Kruskal Wallis Test

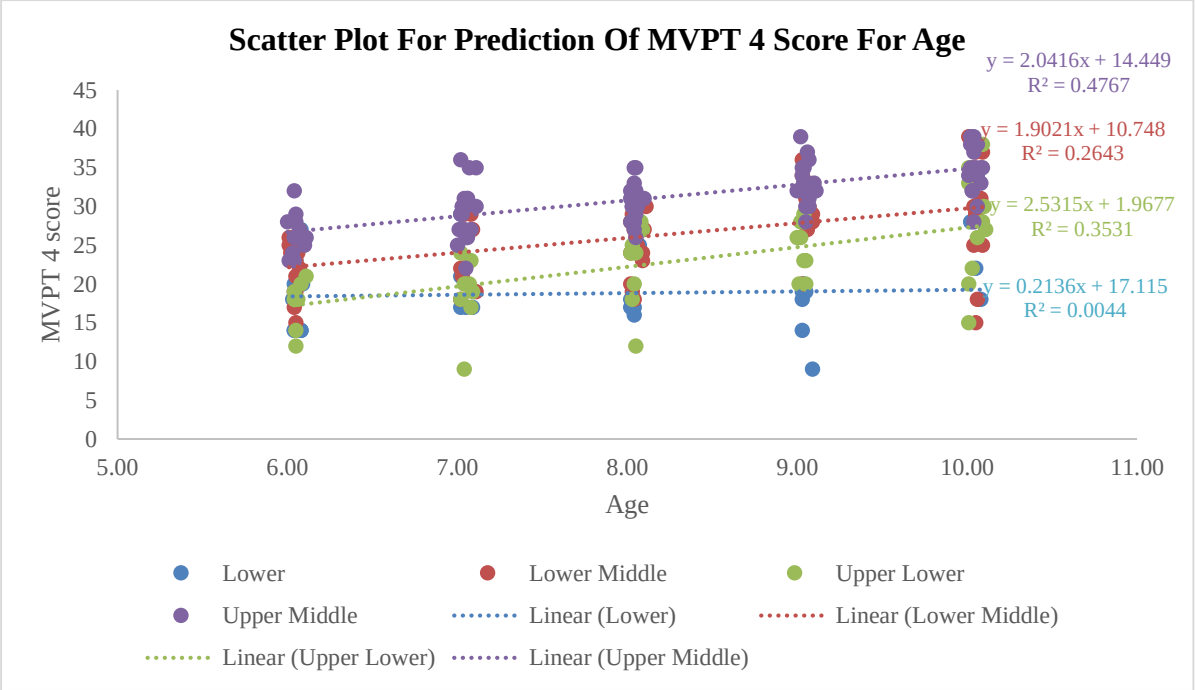
Table No. 6: Correlation Analysis of MVPT-4 scores and age in Socioeconomic Class

Socio-Economic Class	n (No. of children in each class)	Correlation Coefficient (ρ)	p value
II	85	**0.672****	<0.001
III	66	**0.541****	<0.001
IV	45	**0.607****	<0.001
V	28	0.123	0.534
Correlation Analysis: Spearman's Rank-Order Correlation **. Correlation is significant at the 0.01 level (2-tailed).			

Table No. 7: Regression Analysis (Impact of increase in age on MVPT 4 scores among different SES groups)

Socio-Economic Class (SES)	R	R Square	Adjusted R Square	Std. Error of the Estimate
Lower	.066[a]	**.004**	-.034	4.669
Lower Middle	.514[a]	**.264**	.253	4.710
Upper Class	1.000[a]	**1.000**	.	.
Upper Lower	.594[a]	**.353**	.338	4.842
Upper Middle	.690[a]	**.477**	.470	2.921

Figure No. 1 Scatter Plot depicting impact of increase in age on MVPT 4 scores among different SES groups



Discussion

This study measured visual perception in a sample of Kattankulathur school-going children based on MVPT-4 scores and investigated whether socioeconomic predictors (parental education, occupation, and income) influenced the visual perception performance. The MVPT-4 scores varied across socioeconomic classes, signifying that adequate exposure to visual perception skills is necessary for appropriate development of these skills. Children from lower SES performed poorly (lower mean scores on MVPT-4) when compared to children in the middle and upper SES.[19-21] These results are supported by a study[22] conducted in South Africa, concluded that children from low socioeconomic backgrounds showed significantly lower performance on the TVPS-3 compared to those from higher socioeconomic backgrounds. Several studies[23-25] conducted on young primary school students in South Africa also verified that a lower socioeconomic status had a negative effect on visual perception skills, resulting in lower academic achievement.

Educational Levels and Visual Perception

Parental education emerged as a significant predictor of visual perception skills in this study. Children whose parents had an education level up to high school scored lower as compared to those whose parents had attained higher levels of education, such as a diploma, graduate, or honours degree. The implies that parental education directly influences the cognitive environment of the home. Educated parents may be more aware of the importance of early childhood development and are likely to provide their children with enriching experiences that foster visual and cognitive skills. This finding aligns with studies[19,20,21] that have demonstrated a correlation between parental education and various aspects of child development, including language acquisition, executive functioning, and academic achievement. Higher educated parents are also more likely to engage in behaviors that promote

cognitive development, such as reading to their children, encouraging problem-solving activities, and providing access to educational materials[19-22].

Occupational and Income

Children of parents working in elementary occupations (labourers, transport workers agriculture), plant operators, machine operators, and assemblers scored significantly lower than those whose parents were employed as craft workers, skilled workers, technicians, and professionals. Occupation and income are integral components of SES that significantly influence child development. Numerous studies [2,23] have supported the findings of this study, indicating that children from families with higher occupational status and income levels tend to perform better on cognitive tasks, including visual perception. Bradley and Corwyn (2002)[2] found that higher income allows for greater investment in resources that enhance child development, such as educational materials, extracurricular activities, and healthcare, which are critical for cognitive development. Similarly, Yeung et al. (2002)[23] demonstrated that income affects the quality of the home environment, which in turn influences cognitive outcomes in children. Children from higher SES backgrounds are more likely to have access to computers, tablets, and educational software that can enhance learning and visual perception skills.[24] However, the digital divide remains a significant issue, with children from lower SES backgrounds less likely to have access to these technologies.[25] Addressing this divide by increasing access to technology in low-income communities could be a key strategy in reducing SES-related disparities in cognitive outcomes.

Neurocognitive Correlates of Socioeconomic Status

The relationship between SES and cognitive development extends to the neurobiological domain. Recent studies have provided compelling evidence that SES is linked to structural differences in the brain, particularly in regions involved in cognitive processing. A study[26] found that lower SES is associated with smaller hippocampal and amygdala volumes, which are critical for memory and emotional regulation. Similarly, another study[27] reported that SES is related to the thickness of the prefrontal cortex, a region essential for executive functions and decision-making. These neuroanatomical differences may account for the disparities in visual perception skills observed in this study, suggesting that the cognitive advantages associated with higher SES may be underpinned by structural brain differences.

One notable strength of this study is the clear progression seen in scores of visual perception, showing a stepwise increase from lower to higher socioeconomic classes. This may be because individuals from families from higher SES are likely to have greater access to a variety of written, visual, or technological materials compared to those with lower incomes. Additionally, low-income families may struggle to allocate funds for any kind of products or activities for their children, potentially leading to a lack of visually stimulating materials or experiences.

Cultural differences in parenting practices, educational expectations, and access to resources may moderate the relationship between SES and cognitive development.[28] Therefore, future studies could explore these intersections to provide a more nuanced understanding of how SES interacts with other social determinants to shape visual perception and broader cognitive outcomes.

Implications of the Study

The findings of this study have important implications for policy and practice, particularly in addressing the disparities faced by children from lower SES backgrounds. There is a growing consensus in the literature that targeted interventions are necessary to mitigate the impact of SES on cognitive development. For instance, programs that provide access to early childhood education, parental support, and community resources have been shown to improve cognitive outcomes for children from low SES backgrounds. Educators, policymakers, and

healthcare professionals must collaborate to design and implement interventions that address the specific needs of children from diverse SES backgrounds, ensuring that all children have the opportunity to develop essential cognitive skills, including visual perception.

Limitations of the study

The study has various limitations. The sample size was limited to a specific geographic region, potentially limiting its generalizability to the broader population. Additionally, the distribution of samples across groups was uneven, particularly in the upper-class category, which could impact the validity of our findings. In this study, we examined three key components indicative of the socioeconomic status of families: education, occupation, and income of the family head. It is noteworthy that, in the majority of cases, the father served as the head of the family. While data on maternal education, occupation, and income were collected during the data collection process, it is essential to highlight that these variables were not included in the analysis, aligning with the guidelines for outcome measures outlined in the Modified Kuppuswamy Scale.

Conclusion

The study concludes that socioeconomic status is a critical predictor of visual perception development. Visual exploration is essential and key factor for the development of visual perception. Families belonging to lower socioeconomic class need to provide with awareness programs on post-natal care and child development with regard to the role of visual perception in development. Furthermore, future research is essential to compare these differences between schools' of different regions and including mother's socioeconomic status.

Declaration of conflicting interest

The author(s) declare no conflict of interest.

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