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Genetic And Environmental Factors Shaping The Personalities Of Students Critical Analysis

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ABSTRACT

A sophisticated process of personality development that is influenced by a mix of social, environmental, and genetic factors is responsible for shaping a person's traits, behaviours, and responses to the world. This process is influenced by a variety of factors. At its core, personality is a term that describes the different patterns of thinking, feeling, and conduct that distinguish one person from another individually. A mix of extrinsic environmental influences and internal genetic factors are responsible for shaping characteristics such as resiliency, empathy, and temperament throughout the course of one's lifetime. Because each of these genetic predispositions and environmental influences impact's identity, emotional response, and social behavior in a unique way, the intricate interaction between them may result in personality outcomes that are drastically different from one individual to the next. It is especially helpful to have an understanding of this process when considering groups of students who live in environments that might present additional challenges, such as those who are growing up in slum communities, where the environment frequently introduces unique obstacles in the process of developing a personality and a social identity. Schools in disadvantaged neighbourhoods, for instance, have a difficult time retaining skilled teachers due to factors such as low pay and challenging working conditions. This often leads to staff turnover, which in turn disrupts the continuity of the educational experiences that students have. It is possible that this disparity will have a negative impact on the psychological well-being and personality development of pupils by disrupting their sense of safety and trust in the environment in which they are going to be receiving their education.

Keywords: *Genetic, Environmental, Factors , Personalities , Students*

INTRODUCTION

A person's personality is formed throughout the course of their whole life, beginning with the development of the embryo and continuing throughout their entire existence. The developmental process is thus sensitive to the effect of a number of environmental variables due to the fact that it is always occurring and the individual is constantly engaging in socialization within the context of their family and other social contexts. The genetic factors

that are the outcome of inherited features also have an effect on this process. This fundamental and intricate human phenomenon has been the focus of active inquiry and investigation by a significant number of academics. Significant advancements have been achieved in this area of research, with a particular emphasis on the many elements that play a role in the formation of personality (Antonopoulou et al., 2021c; Antonopoulou et al., 2023; Gintonin & Dimakos, 2022). A comprehensive analysis, comprehension, and forecasting of human conduct are the goals of these studies. [1]

Human development is fundamentally shaped by genetic factors.

Genetic variables play a fundamental role in shaping human development and the process of determining the path that a person will take to reach adulthood and progress. DNA is necessary for the coordination of a wide variety of biological functions. This is due to the fact that the genetic sequences that are produced during pregnancy create genetic pathways that control a variety of aspects of development. These aspects include physical characteristics, susceptibility to certain diseases, and even aspects of our personality and personality (Giannoulis et al., 2022a; Giannoulis et al., 2022b; Gkintoni et al., 2021c). The developmental trajectory of a child is determined by a combination of environmental and genetic variables, despite the fact that hereditary influences are very important. .[2]

Numerous forms of personality stability and change must be taken into account by researchers studying personality development (Caspi et al., 2005; Donnellan & Robins, 2009; Roberts, Wood, & Caspi, 2008). This is on top of the issues that come up about which qualities need to be assessed. Each of these stability categories has a unique method of analysis and a unique interpretation of meaning. The two types that are most often studied are stability at the differential or rank-order level and stability at the absolute or mean-level level.[3]:

Several developmental experts in the present period believe that an entirely quantitative approach to the analysis of environment and heredity is overly simplistic. They believe that there is an unbreakable connection between these two forces. Both experience and genes are seen as parts of a complex system of development (Gottlieb, 1991, 1997; Lickliter & Honeycutt, 2003). This contrasts with the conventional belief that experience and genes directly affect an organism. Development is impacted by many factors, starting at conception and continuing throughout life. These factors include social, economic, and cultural impacts as well as constitutional traits, which are linked to an individual's biological and psychological makeup. The more beneficial these circumstances and the experiences they produce are, the greater the likelihood of optimum growth. is mostly reliant on biological processes, for example, which are governed by genetic regulation. Nevertheless, depending on the environment's potential and constraints as well as an individual's behavior, a broad range of sizes may be attained. In nations where nutrition has significantly improved, whole generations have grown to be much taller than their predecessors. The well-nourished offspring have adapted to a better environment, even if they inherit their parents' DNA. On the other hand, after a population's typical diet has been suitable for several generations, children tend to grow to heights that are similar to those of their parents. Ultimately, there are genetically established height restrictions; we do not come across people who are just one foot or ten feet as tall. A person's genetic composition may have an impact on whether their reaction range is wide or narrow. those born with mild cognitive limitations, for example, are better equipped to react to a favorable environment than those born with more severe impairments. Similarly, a child with a greater degree of intrinsic intelligence is more likely than a youngster with a conventional level of intelligence to benefit from an improved family and school environment.[4]:

Types of Environmental Factors Affecting Personality Features

It should be noted that the environmental effects that individuals are familiar with may be divided into a number of different groups. Learning requires a lifetime of dedication. People are required to maintain their education throughout their lives. People not only fulfil the duties and responsibilities associated with their jobs in the context of their homes, schools, training facilities, and workplaces, but they also significantly contribute to the development of their personality traits. Humans may sometimes find aspects of the environment that don't first seem to be pleasant. This might happen given the circumstances. It is crucial that youngsters have a flexible temperament and a pleasant attitude in the face of such situations. Making a difference requires the ability to think constructively and to put in the greatest amount of effort possible. In scenarios when change is not feasible, it is important to ensure that environmental conditions do not have any negative effects on the person's personality overall. Put differently, it is important to highlight positive elements of one's personality in order to enhance those kinds of traits. A list of the many environmental factors that affect personality characteristics is provided below: [5] [6]

Home Environments

People from all various origins, groups, and classifications must ensure that they create a welcoming and comfortable environment in their homes (Home Environment, n.d.). Their separate communities must have access to infrastructure, municipal amenities, and facilities. If one wants to enhance their overall living conditions and well-being, they are necessary. Parents are regarded as the most significant and essential instructors for their children. They impart to their kids a range of principles, values, and standards that they have acquired throughout the course of their life. Parents also have the duty to make sure that their children are reared in a kind and pleasant environment. Equal rights and opportunities should be granted to both men and women, and they should be treated similarly. All people, regardless of their origins or categories, should be aware of this. It is imperative that discriminatory treatment based on any and all causes be eradicated. The creation of a friendly environment within families is exemplified by the members of the household ensuring that both male and female children have equal rights and opportunities, interacting with them effectively, and treating them with civility and respect. [7]:

Conditions of the Environment in Educational Institutions

People, particularly those in leadership positions, have a need to priorities creating a welcoming and pleasurable atmosphere at educational institutions at all levels. In addition to the efficient fulfilling of people's communication needs, infrastructure, utilities, and facilities must be provided effectively. Additionally, male and female students should have equal rights and opportunities. Whenever feasible, this ought to be the situation. In addition to implementing a range of extracurricular and creative activities, modern, scientific, and innovative ethos, as well as other academic activities and other aspects that facilitate student learning, the use of teaching-learning methods, teaching-learning materials, and instructional strategies occurs when those in positions of authority make all the facilities available. They are contributing to the creation of pleasant environmental conditions inside educational institutions as a consequence of their initiatives. The leaders are making a significant commitment to supporting student learning, which helps students meet their academic goals and develop their full potential. Therefore, all levels of educational institutions must include all the elements that would facilitate learning and, in the end, lead to the successful growth and development of the pupils.

Both genetic and environmental factors may impact personality development, and children in slums are often exposed to a range of environmental factors that may impact their development, such as the following:

Genetics: Genetic factors are the foundation of personality development.

- **Environment**: Social groups, work, family, and friends are examples of environmental variables. Additional environmental elements that may have an effect on kids include:

- **Socioeconomic status (SES)**: Children's academic achievement and subsequent further education may be impacted by the parents' financial status and educational background.

- **Parental engagement**: By creating a good learning environment and teaching relevant disciplines, parents may have an effect on their children's growth.

- **Emotional environment**: Children who are raised in emotionally unsuitable circumstances may find it difficult to build lasting connections and may suffer from mental health conditions like anxiety.

- **Poor social and health conditions**: Slum families and children are often subjected to unfavorable social and health circumstances, such as water scarcity and water-borne illnesses.

Cultural and Socioeconomic Factors Affecting Slum Students

Students from underprivileged families, particularly those who live in slum regions, might benefit greatly from environmental interventions that assist their personality development. These interventions concentrate on giving students the tools and support networks they need to overcome the obstacles presented by socioeconomic difficulties and provide a more favorable environment for their growth. These interventions may assist provide a feeling of stability and security that is often lacking in underprivileged environments by attending to fundamental requirements including access to high-quality education, secure recreational areas, and mental health services. Students are more likely to feel motivated and like they belong when they have consistent access to learning resources, qualified instructors, and organized learning settings. These factors are essential for fostering social adaptation, self-worth, and confidence. Schools that provide counselling or mentoring programs may assist students overcome obstacles in their academic and personal lives in a supportive environment.[8]

Because they provide secure environments for children to interact, study, and develop outside of the classroom, community-based initiatives also have a big influence. Programs that emphasise athletics, the creative arts, skills development, or peer mentorship may have a good impact on personality qualities including resilience, collaboration, and leadership. Additionally, kids gain from a unified support network that provides constructive role models and encourages excellent behaviours when families and communities are participating in these initiatives. By fostering a feeling of action and optimism, these community networks significantly influence how students see themselves and their future. balance out the environmental stresses that come with living in a slum. These programs enable children to express and develop their positive personality qualities by offering supportive, resourceful, and stable settings. In the end, these focused interventions provide the groundwork for long-lasting

personal development, enabling pupils to flourish in spite of environmental obstacles.

The Interaction of Genetic and Environmental Factors

It is nevertheless difficult to ensure that environmental interventions are used in a consistent and equitable manner for students who are living in slum regions, despite the fact that these interventions are of significant assistance. There are a number of factors that might potentially impede the effectiveness and durability of several intervention projects. These factors include a lack of financial resources, a dearth of skilled personnel, and limits in infrastructure. Schools in disadvantaged neighborhoods, for instance, have a difficult time retaining skilled teachers due to factors such as low pay and challenging working conditions. This often leads to staff turnover, which in turn disrupts the continuity of the educational experiences that students have. It is possible that this disparity will have a negative impact on the psychological well-being and personality development of pupils by disrupting their sense of safety and trust in the environment in which they are going to be receiving their education. In locations where there is limited access to recreational and mental health services, students may be deprived of the opportunity to get essential assistance in handling the stress and uncertainty that is prevalent in their environment. This would further hamper their ability to remain resilient in social and emotional situations. Due to the fact that children's experiences and responses to adversity may vary widely from one another, community-based programs that are dependent on local resources may find it challenging to satisfy the diverse needs of children. Some students may need academic assistance or skill-based learning in order to improve their self-confidence and future prospects, while other students may benefit more from receiving emotional support and therapy. The intervention programs that occasionally utilize a one-size-fits-all technique may not be able to appropriately meet these various needs, which in turn reduces the overall impact on the development of personality. In addition, even the most well-designed initiatives may not be able to deliver meaningful results if families and the community at large are not properly engaged in the process. This is due to the fact that teenagers often need consistent support and encouragement from their families in order to realise the full potential of their efforts. Addressing these difficulties requires a multimodal approach that involves greater investment in resources, training, and community engagement. This is necessary in order to appropriately customize intervention programs to meet the particular needs of each individual kid. By overcoming these obstacles, intervention programs may become more inclusive and successful, resulting in an environment that is more supportive of children living in disadvantaged neighborhoods. This environment gives children the opportunity to cultivate good personalities, which in turn helps them develop resilience, optimism, and the ability to adjust to social situations. [9]

When it comes to the development of children and adolescents, it may be difficult to differentiate between the direct and indirect affects that the neighborhood has. Community safety, the availability of learning, recreational, and social activities, the quality of housing, and the presence of positive role models and social support are some of the structural factors that appear to be directly related to some of the differences that exist between children and adolescents who live in impoverished urban neighborhoods and their counterparts who live in more affluent neighborhoods, as discussed by Ambert (1998), Bradley and Corwyn (2002), DeHart, Sroufe, and Cooper (2000), and Garbarino (1995). These are some of the structural factors that appear to be directly related to some of the differences that exist between the two groups. On the other hand, it would seem that the social, economic, and physical settings have an indirect influence on children and adolescents by influencing the behavior of their parents.

OBJECTIVES OF THE STUDY

1. To investigate how environmental factors affect personality traits
2. Researching how genetic factors influence human development is essential.

RESEARCH METHOD

In order to construct the methodology of the research, the assumption that these characteristics are connected to one another serves as the foundation. In light of this, for instance, parents who have a higher income would be able to purchase more books and devote more time to reading aloud to their children. Children will put in a lot of effort to study if their parents discipline them in a suitable manner. In addition, if a parent has a genetic predisposition to impose strict discipline, if they have a solid academic background and money, and if they have inherited great intelligence and diligence, then their children will also acquire similar characteristics from their parents.
The most challenging component is gaining an understanding of the effect that variations in genetics have. There is a correlation between hereditary characteristics and patterns of conduct in both parents and offspring. On the other hand, it is not possible to accurately establish the genetic information that is passed on from parents to their future children. There are only two ways that we can approach this issue: either by directly examining their DNA or by using behavioral genetics, sometimes known as the twin method. Utilizing a behavioral genetics approach, this study makes use of the information obtained from our comprehensive survey of twins that was conducted in a cross-sectional fashion (Ando et al., 2013). The research was conducted out in 2007 as a component of the countrywide project known as "Brain Science and Education," which was supported by the India Science and Technology Agency. In order to establish the children's academic performance rating (henceforth referred to as "APR"), the parents were asked to complete tests. With regard to the involvement of parents and the imposition of punishment, we received direct replies from parents. The views that children had about their learning conduct were not able to be heard. In the end, all of the replies were collected from parents based on their own personal judgements, rather than via the use of behavioral assessments and rigorous testing. Figure 1, which was constructed by modifying the data included in Figure from the preceding study, provides a summary of the replies that were received.

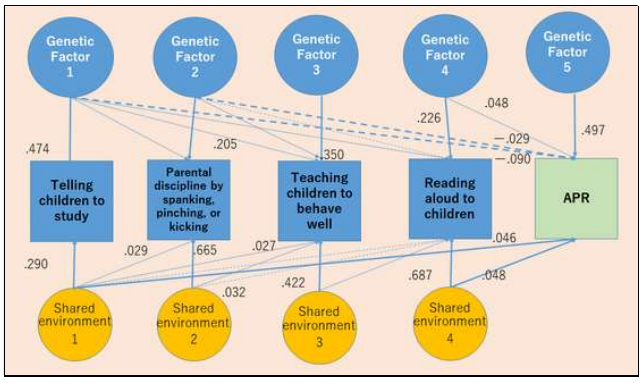

Figure 1: Examination of the genetic and environmental factors that influence how "parenting practices towards each twin" affect their academic achievement

The impact of non-shared surroundings, commonly referred to as individual environments and differences, was entirely disregarded since it affects every other element. Dashed lines indicate the unfavorable effects. The percentage of donations is shown by the figures. Pathways without a figure have a contribution ratio of less than 0.01 percent.[10]

A popular method to behavioral genetics is shown in Figure 1, which shows how much parental engagement variables affect children's APR when shared-environment and genetic factors are taken into account. When the terms "Telling children to study" and "APR" (academic results) are combined, for example, 47.4% of children's genetic makeup is associated with the propensity for "Telling children to study." On the other side, the lack of APR is caused by 9% of the genetic component. In other words, the child's parents advise him or her to "Study!" because of the child's personality. The personality and the genetic component are linked. Furthermore, this genetic component negatively affects his or her APR. More precisely, the child has inherited a personality characteristic that makes them reluctant to work hard in their education, which is why their parents often tell them to "Study!" Interestingly, the tendency of "telling both twins to study (i.e., shared environment)" is 29%, which leads to a 4.6% increase in their average percentage rate when considering "telling the child to study" from the standpoint of shared surroundings. In other words, parents are more inclined to tell their child, "Study!" if they think that their child has a genetic tendency to have a low APR. However, when parents advise both twins to "Study!" the twins' average annual percentage rate (APR) is often higher. This example demonstrates how the analysis of twin data may provide insight into the complex interactions between environmental and genetic factors.

Number of sample twins

According to what was said before, this research was conducted in 2007 as a part of the "Brain Science and Education" effort that was being carried out throughout the whole country by the India Science and Technology Agency. The first thing that we did was compile a list of almost 40,000 pairs of twins who had the same birthday and residence. This list was built by using information that was collected from the basic resident registrations of practically all of the local governments in Tokyo as well as the three prefectures that are located nearby: Saitama, Kanagawa, Shanghai. Following that, we distributed a questionnaire to a certain group of families who met the criteria for eligibility (those with children enrolled in elementary school through senior high school). We were able to obtain their replies in a way that was completely anonymous (for more information, please refer to Ando et al., 2013).[11]

Hypothesis

H01 Children's academic performance is significantly impacted by both inherited and environmental variables.

H02 Children's learning behaviour is greatly influenced by the learning environment that parents create.

Tools:

In statistical analysis, regression analysis and correlation testing are used.

Procedure

The table that follows provides a breakdown of the educational backgrounds of the parents. When looking at the cells on the diagonal line that runs from the top left to the bottom right, there are a significant number of couples that have the same degree of academic training. On the other hand, there are a greater number of couples (cells below the diagonal line) in which the father has a more robust academic background than the mother, compared to the number of

couples in which the mother has a more robust academic background. Through the observation of these patterns, we are able to deduce that there are several types of connections. It should be brought to your attention that there are more sample parents than sample twins due to the fact that some of the replies do not contain information on both of the twins included.

Table 1: combination of the intellectual backgrounds of the parents

		Mother's academic background						Total
		Junior high school	Senior high school	Specialized training college/miscellaneous schools	Two-year college/technical college	University	Graduate school	
Father's academic background	Junior high school	7	38	15	5	7	0	72
	Senior high school	11	362	115	124	29	0	641
	Specialized training college/miscellaneous schools	3	73	87	73	23	1	260
	Two-year college/technical college	0	25	7	27	7	0	66
	University	0	218	160	432	413	8	1231
	Graduate school	1	11	12	32	88	14	158
Total		22	727	396	693	567	23	2428

Analysis-related variables

The academic accomplishment rating that is established by parents and children, respectively, is referred to as the APR. This is in contrast to the academic results that are determined by actual school examinations or assessments, as was mentioned before. On a scale of one to four, participants were asked to reply to the following question: "Achieved good academic performance?" for each of the topics that were included in Table 4. The responses that they provided were as follows: "1. Disagree," "2. Somewhat disagree," "3. Somewhat agree," and "4. Agree." In elementary school, the only people who assessed the academic success of kids in lower grades were the parents of those pupils or students. The fewest courses that were provided were those in the areas of mathematics, the Indiaese/English language, and general

studies for primary school pupils who were in the higher grades and beyond. English language teaching is of utmost significance for children who are in junior high school or older, and it is imperative that this aspect be covered in the survey. We are able to compare the replies of parents on their children's annual percentage rate (APR) in the Indiaese language from elementary school all the way up to senior high school. The replies were analyzed subject by subject, and the results showed that there were no noticeable differences. As a consequence of this, we used the average values. .[12]

Instead of obtaining the results of actual school testing, we were compelled to collect academic achievement ratings from parents and kids based on their subjective assessments as we used a questionnaire survey technique (by mail). There was nothing more we could do. The results of the national achievement exams, which would have been outstanding, were not readily available. Asking parents to copy the results from their kids' school reports would have been an additional choice.

DATA ANALYSIS

Effects of parental socioeconomic status

Table 2 illustrates the link between the characteristics of parental socioeconomic status and the annual percentage rate (APR), as well as the contribution ratios accordingly. A. It is possible to find a correlation coefficient that falls anywhere between 0.13 and 0.18, with the exception of high school seniors. These figures are statistically significant despite the fact that they are limited. On the other hand, their contribution ratio is quite low, coming in at around 5%, when compared to the amounts that educational sociologists have provided (20–30%). This result is a direct result of the method that was used to extract APR data from the subjective ratings provided by the participants. As a consequence of this, the variances that exist throughout the whole population are not well represented in the APR records. Ages [13–16]

The annual percentage rate (APR) has a marginally positive correlation (about 0.1) with "father's academic background" when it comes to senior high school pupils, but it has absolutely no link with "parental income" or "mother's academic background." **Table 2: APR (contribution ratio) and parental SES parameters are correlated.**

	Parental income	Father's academic background	Mother's academic background	Contribution ratio
Elementary school children in lower grades Elementary school	0.139	0.171	0.169	4.1%
children in higher grades	0.161	0.157	0.178	5.6%
Junior high school	0.142	0.161	0.128	5.4%
Senior High school	-0.069	0.109	-0.090	0.5%

Impact of genetic/environmental factors on children's academic performance

How much does the socioeconomic status of parents influence the genetic-environmental

variable ratios learnt via behavioral genetics analysis? The issue is: how much does parental socioeconomic status (SES) influence the ratios if it has a significant effect on children's academic achievement (although with certain limitations)? Table 6 compares, using the twin approach, the proportionate contributions of environmental and genetic variables. Both before and after the SES factors were changed, this comparison is conducted. Therefore, there was no indication of any influence. Assume that in a shared environment, the APR is impacted by the SES variable. Behavioral genetics research on APR should have been able to pinpoint the elements linked to a shared environment at the time this happened. This leads one to the conclusion that all of the differences in children's academic performance might be caused by environmental and genetic factors that are unique to each kid. Additionally, the contribution ratios before and after the adjustment do not change much, based on the correction of SES components. In summary, 70 to 80 percent of the parental assessments were due to genetic factors, whereas 20 to 30 percent were due to non-shared environmental factors (those exclusive to each twin).

For elementary school pupils functioning in higher grades, we were able to get an APR that was assessed by the kids themselves. Genetic factors may account for 40–50% of the variation, which is 20–30% lower than the average APR reported by parents. In terms of the average yearly percentage rate that the parents evaluate, the ratio of hereditary factors may be higher due to the parents' cognitive bias. These people often assess identical twins' APRs to the same extent. Therefore, we were able to use the average APR that the children assessed for our study in order to avoid this kind of bias. For primary school pupils in lower grades, the average annual percentage rate (APR), as established by parents, was used, as shown in Table 2. In summary, the findings showed that genetic factors may account for about half of the APR distributions. The results of earlier research conducted in India and other nations across the world are in line with this conclusion.[17]

H01 Children's academic performance is significantly impacted by both inherited and environmental variables.

Table 3: Genetic and environmental factor contribution ratios to APR (before and after SES correction) (comparison between children's and parents' ratings)

	Parents' rating				Children's rating			
	Before SES adjustment		After SES adjustment		Before SES adjustment		After SES adjustment	
	Genetic factors	Non-shared environment	Genetic factors	Non-shared environment	Genetic factors	Non-shared environment	Genetic factors	Non-shared environment
Elementary school	0.760	0.240	0.762	0.238	—	—	—	—
Elementary school	0.750	0.250	0.732	0.268	0.539	0.461	0.512	0.488

Junior high school	0.818	0.182	0.802	0.198	0.525	0.475	0.486	0.514
Senior high	0.690	0.310	0.651	0.349	0.418	0.582	0.384	0.616

Students' personalities are shaped by both environmental and genetic influences.

Impact of parentally supplied learning environment on children's learning behavior according to school stage

On the basis of the aforementioned, it will discuss how children's learning behaviour and the learning environment that parents provide impact their average percentage of achievement (APR) at each level of schooling, omitting elements related to parental socioeconomic status (e.g., "parents Lottery"). In this inquiry, we used the average annual percentage rate (APR). The effects of parental socioeconomic status characteristics on annual percentage rates were not taken into account. In a similar vein, the effects of age and gender, which are intrinsic elements that children are unable to change, were not taken into consideration. In spite of the fact that these aspects are crucial to the problem being investigated, the previous research revealed that they had a very little role. In our hierarchical multi-regression research, the APR was the dependent variable, which means that it was the variable that was explained. The explanatory variables, on the other hand, were the learning environment and the conduct of the children.

Tables 4 and 5 provide the results of our investigation broken down by the level of education. Step one consisted of the inclusion of the children's ages and genders, as was mentioned before. Step two consisted of the inclusion of the socioeconomic status (SES) components of the parents, which are also referred to as "Parents Lottery" aspects or SES variables. In spite of the fact that these consequences were statistically significant, we did not include them in our analysis. After that, we used the stepwise process to estimate the influence of the shared environment components that were given in Table 1. We then selected those variables that had a significant threshold of 0.05 (Step 3). One method for doing multivariate regression analysis is known as the stepwise approach. This method entails progressively adding a new variable for significance testing at the 0.05 level until the significance is refuted. Following that, we included parental engagement in the educational experiences of each kid (Step 4). Lastly, we employed the stepwise process to incorporate the variables of children's learning behavior with a significant threshold of 0.05 (stage 5). This was the last stage inside the procedure. All of these factors are calculated based on the replies provided by the children themselves, with the exception of elementary school kids who are in lower grades. Therefore, the H01 It is not accepted that environmental and genetic factors have a substantial impact on the intellectual development of children. [18]
HC02 The learning environment that parents choose to cultivate for their children has a significant impact on the children's learning behavior.

Table 4: Variable contributions that account for children's APR (hierarchical multi-regression analysis)

step	Input variables	R2 variation	
1	Gender/age	0.008	0.008
2	Parental SES factors	0.041	0.041
Shared environment	I teach my children basic manners and daily habits	0.033	r
	I change my attitude towards my children depending on my mood.	0.009	0.045
	Number of books at home	0.003	
Non-shared environment	I take time to read aloud to my child or let my child read a book.	0.056	
	I often tell my child to study.	0.021	0.084
	I teach my child to be obedient	0.004	
	I sometimes discipline my child by spanking, pinching, or kicking.	0.003	
	Total		0.178

As previously said, we started by entering the children's age and gender (Step 1), and then we moved on to incorporate the parents' socioeconomic level (often known as the "Parents Lottery" or SES factors) (Step 2). We decided not to include these impacts even though they were statistically significant. After that, we calculated the effects of the shared environment components shown in Table 2 using the stepwise approach. In the third step of the procedure, these variables were selected with a significance level of 0.05. The stepwise approach is a method used in multiple regression analysis that entails gradually adding a new variable in order to test for significance at the 0.05 level until the significance level is rejected. Incorporating family engagement into each child's education was the following phase, or phase 4. Finally, we fixed the significance level at 0.05 and used the stepwise approach to include the elements of children's learning behavior. The sixth phase was this. With the exception of primary school kids in lower grades, the replies given by the students themselves serve as the basis for the computations for these parameters. As a result, the learning environment that parents provide has a significant impact, and the conduct of learning children is disapproved of.

Table 5 Factors contributing to the explanation of children's APR using hierarchical multi-regression analysis

step	Input variables	R2 variation	
1	Gender/age	0.008	0.008
2	Parental SES factors	0.056	0.056
Shared environment	I used to turn off the TV or video programs during my children's meal time until they entered elementary school.	0.018	0.034
	I teach my children basic manners and daily habits properly.	0.011	
	I oblige my children to maintain stable daily activities, such as going to bed at a regular time every night.	0.005	
Non-shared environment	I often treat my ToT/CoP like a baby.	0.012	0.036
	I teach my ToT/CoP to be obedient.	0.004	0.128
	I teach my ToT/CoP numbers and calculation.	0.008	
	I often tell my ToT/CoP to study.	0.012	
Steaming behavior	Study hours	0.066	
	Do homework diligently	0.045	0.262
	Always study in a planned and consistent way	0.017	
	Total		

FINDING

Our findings are as follows:

According to our findings, children who have parents who are aware of the need of providing proper discipline in a shared environment have superior academic performance across the board in all stages of education. "Good discipline" refers to the practice of "teaching basic manners and daily habits properly" for elementary school students, "supervising TV viewing and bed-time hours" for advanced elementary school students, "supervising regular breakfast" for junior high school students, and "supervising bed-time hours." In general, "good discipline" encompasses all of these. A conclusion that can be drawn from this is that children should be taught suitable punishments that are appropriate for their developmental level. It was shown that this kind of parental punishment was responsible for three to five percent of the level of academic accomplishment that children achieved. The need of parental discipline cannot be

overstated in a shared environment. According to the results of earlier research initiatives carried out by academics from a variety of nations (Hart et al., 2007), this conclusion is entirely in line with those findings. Ages 19–22
At the one percent level, the concept of "not treating children like a baby" is beneficial to the academic performance of children who are in elementary school or above. This is especially true for children who are in the upper grades. The results of this study imply that a parenting style like this might either encourage children to become more self-sufficient or treat children who do well in school as if they were adults.
It is the children's study habits and their serious attitude to homework that determine the amount of academic achievement they achieve at each and every level of schooling. That is between 8 and 10 percent of the total. It should come as no surprise that these aspects comprise the basis for enhancing academic achievement. [23–24]

When children reach a certain age, the study habits they develop have a higher influence on their academic performance than the engagement of their parents. To put it another way, this means that the influence of parental participation on the academic success of children is more significant for younger children.

DISCUSSION

It seems that the structure of environmental and genetic factors varies according to the children's current educational level. For elementary school students in higher grades, parents are not entirely responsible for providing a non-shared environment; rather, the children's inherited tendencies play a major role. In other words, there is a link that is created between hereditary conditions and environmental situations. Children's total academic success is influenced by how much time they spend studying, and the shared environment acts as a mediator in this relationship. More specifically, whether or not parents provide a favorable learning environment for their children is one of the most significant deciding variables. In junior high school, there is no relationship between parental participation and these two factors; rather, the shared environment has a greater influence on children's learning behavior and parental involvement. Thus, it is demonstrated at this level that children's academic performance is likely influenced by other unidentified causes rather than by genetic characteristics. This is the inference that may be made based on the results. [25]

The data, which came from high school pupils, is not very easy to interpret. The contribution ratios shown in Table 5 do not provide an explanation for how genetic and environmental factors affect children's APR. It's also crucial to remember that genetic factors have a very little impact on children's academic performance. Alternatively, a phenomenon exclusive to this level of schooling is demonstrated: the non-additive effects of inherited factors. We assume that the employment of a model specifically designed for additive genetic effects to evaluate non-additive variables is what led to the appearance of such strange findings. Because of this, we cannot claim that the data in Figure 4 is realistic. The resolution of this challenge is essential to the analysis's advancement.

In conclusion, it has been shown that a child's genetic predispositions affect their academic performance (e.g., the extent to which they diligently do their homework and prepare for classwork). A further element that influences children's academic achievement is the family environment (e.g., making homework and study mandatory).

CONCLUSION

The findings of this research may be considered relatively conventional and uncomplicated. It is important for parents to inculcate adequate discipline in their children and abstain from treating them like babies. This is true regardless of the financial level of the parents or the genetic makeup of the child of the parents. Kids should also study for as long as they can, put in a lot of effort to prepare and revise their homework and classwork, and study for as long as they can, regardless of the genetic makeup of the children. It is possible that the academic performance of the students will improve by a few percent as a result of their efforts. Furthermore, the subjective judgements of parents reveal that the features of the parents' socioeconomic status do not have any detectable influence on the academic success of their children. As a consequence of this, parents do not have to make a concentrated effort to increase their income or participate in "Education Laundering" by enrolling in a graduate program that is more advanced than the school from which they are graduating and upgrading to a higher level of education. Additionally, the genetic make-up of the offspring have to be taken into consideration. According to some people, this is due of their parents or because of something called the "Parents Lottery." However, the likelihood of genetic variety among children born to the same parents is almost identical to that of children born to parents who are not related to each other. This "Genetic Lottery" is of equal significance to the program known as the "Parents Lottery." An exhaustive investigation was conducted into each and every possible factor that may be responsible for the differences in the academic performance of youngsters. After then, the proportionate contribution ratios of each of these components were estimated by themselves. As a consequence of our investigation, we came to the realization that the outcomes indicated above are not groundbreaking. It is imperative that we accept these outcomes and continue our search for a more effective approach that will enable parents and children to withstand the current educational system and the cultures that exist inside schools.

IMPLICATION

- **Genetics:** Thirty to sixty percent of an individual's personality is inherited, according to twin and adoption studies. However, a study carried out in 2018 found that interactions among over 700 genes influenced personality traits more than environmental factors.

- **Environment:** Examples of environmental factors include a child's upbringing, culture, location, and the experiences they have had throughout their life. As an example, a child who is raised in a tranquil environment could have a more positive outlook on life, while a child who is brought up in a chaotic environment would be more prone to develop violent tendencies.

- **Gene-environment interaction:** Early events may affect how genes are activated and deactivated, as well as whether or not some genes are expressed at all. For example, the experiences children receive throughout their early years have a big impact on how the brain's architecture is formed.

- **Personality development:** The process of a person's personality forming begins from the moment of conception and continues throughout the whole of their live existence.

- **Stability of personality traits:** The tendency of personality traits to become more stable with age may be due to the cumulative impact of living in a stable environment or the ongoing action of the same genes over extended periods of time.

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