Do Explicit and Implicit Parental Financial Socialization Influence Students' Financial Literacy? Evidence from India

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Abstract

Purpose: The present study investigated how explicit and implicit parental financial socialization influenced students' financial literacy (FL).

Design/Methodology/Approach: Data were collected from 200 PG students at the Central University of Tamil Nadu, India, using a multiple-stage random sampling technique. Multiple linear regression and an artificial neural network (ANN) analysis were used to identify the most important predictors of FL.

Findings: The findings showed that implicit parental financial socialization significantly positively impacted students' FL; whereas, explicit parental financial socialization did not. Additionally, students' FL is not considerably impacted by viewing parents as financial role models. Still, when parents had more income and educational attainment, their children showed a larger degree of FL. Based on the ANN analysis, implicit parental financial socialization was the most significant predictor of students' FL.

 $Practical \ Implications: The findings \ emphasized \ that \ parents \ must \ receive \ adequate \ financial \ education \ and \ exhibit \ responsible \ financial \ behavior \ in \ order \ to \ improve \ students' \ FL \ and \ their \ financial \ well-being.$

Originality: The impact of parental financial socialization, both explicit and implicit, on pupils' financial literacy in the Indian setting has not, as far as we are aware, been studied in the literature before.

Keywords: financial literacy, financial socialization, financial behavior, family finance, and socialization

JEL Classification Codes: A20, D14, G53

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inancial literacy (FL) entails understanding the value of money and how to maximize the benefits of money utilization (Kadoya & Khan, 2020). FL has become more complicated than ever before as people become increasingly concerned with managing their finances in the best possible way to live happily in today's sophisticated financial atmosphere (Ali et al., 2015). FL is widely recognized as a crucial component for fostering meaningful financial inclusion. It plays a pivotal role in shaping individuals' understanding of the intricate financial landscape, empowering them to access and utilize diverse formal financial services to meet their financial goals (Kavita & Suman, 2019; Kapoor & Mohandas, 2023; Khongwir & Sharmiladevi, 2023; Tandon & Singh, 2021). Moreover, a higher level of FL has been linked to positive outcomes such as improved financial

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attitudes and behaviors (Vaghela et al., 2023), better investment intention (Nag & Shah, 2022), and reduced impulsive consumption (Saptono et al., 2019). Consequently, FL contributes significantly to fostering desirable financial well-being (Bhonde-Saraf, 2016; Sehrawat & Vij, 2020), thereby positively influencing overall well-being.

It is necessary to ensure the financial freedom and financial well-being of the citizens in general and youth in particular to make a financially empowered nation. It is crucial to support youth FL in order to create a generation of financially independent adults since the aptitude and potential of a country's younger residents determine its future. FL is significant in the lives of today's teenagers and young people because they are more exposed to financial decision-making than earlier generations were at their age (Aprea et al., 2016). Young adults are expected to exhibit desirable financial behavior because mistakes made at this stage of life will have the potential to delay future financial planning and have an impact on their attitude toward money, which could last into adulthood (Sharif et al., 2020; Shim et al., 2010). Since young people are supposed to be financially literate, a lack of sufficient financial literacy can lead to overconfidence, a love of risks, and impatience (Mudzingiri et al., 2018). The recognition of the importance of FL in the lives of the younger generation has led to an increase in studies on FL of the younger generation. Jayaraman and Jambunathan (2018), Kiliyanni and Sivaraman (2016, 2018), and Seotsanyana (2019) reported that young adults and students exhibited low levels of FL. However, Ergün (2018) and Mahapatra et al. (2017) observed that students tended to have a medium level of FL.

On the other hand, Oehler et al. (2018) discovered that students had a high degree of FL. Despite these varied findings, most studies indicated that students generally demonstrated low or medium levels of FL. Furthermore, a thorough literature study conducted by Garg and Singh (2018) supported the global prevalence of low FL in young people.

It is understood that youngsters' FL is modeled by their surroundings and is influenced by various socio-economic characteristics. Parents are considered the primary socialization agents of children. Supportive parenting helps children acquire new skills, behaviors, and sympathy/empathy for others (Mirabile et al., 2018). Parents are regularly identified as children's most influential and impactful source of financial socialization (Danes & Yang, 2014; Gudmunson & Danes, 2011; Shim et al., 2010; Zhu, 2018). Parents are the main people who often form a child's financial understanding, attitudes, and behaviors through their actions, words, and experiences. Children learn about finance from their parents both through intentional and direct teaching methods, such as explicit instruction and hands-on participation, as well as through more passive means, such as observing their parents' financial behaviors and attitudes (Jorgensen & Savla, 2010). In other words, kids can learn about money management through both formal instructions and by observing and imitating their parents' financial habits and attitudes. This highlights the importance of parents setting a good example for their children in terms of money management and having constructive conversations with them.

Since parents' financial socialization plays a crucial role in enhancing children's FL, it is necessary to conduct studies to understand how parental financial socialization influences their children's FL. As far as India is concerned, one of the fastest growing emerging countries, these kinds of studies are less in the literature. Moreover, there is a notable absence of studies that specifically investigate the distinct effects of explicit and implicit parental socialization on children's FL. Thus, the current study addresses the question, "Do explicit and implicit parental financial socialization influence students' FL?"

Theoretical Background and Hypotheses Development

Financial Literacy

It is observed that research on FL and related themes has significantly increased in recent years

(Arjun & Subramanian, 2024; Goyal & Kumar, 2021). According to the bibliometric analysis of internationally renowned journals like the *International Journal of Consumer Studies* (Paul & Bhukya, 2021) and the *Journal of Consumer Affairs* (Baker et al., 2021), FL has now emerged as one of the main research areas in consumer studies. Goyal and Kumar (2021), who reviewed global publications on FL up to 2019, discovered that there is still disagreement among academicians and industry professionals regarding the conceptualization and operationalization of FL.

Noctor et al. (1992) defined FL as "the ability to make informed judgments and effective decisions about using and managing money" (p. 4). While considering long-term financial security, Jump\$tart Coalition (2007) extended the FL definition as "the ability to use knowledge and skills to manage financial resources effectively for lifetime financial security" (p. 1). Remund (2010) defined FL as:

A measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions. (p. 284)

To do this, a thorough evaluation of FL research carried out in the US since 2000 was carried out. Remund (2010) conceptualized FL by including individual understanding, ability, and confidence aspects of personal finance. Similarly, the Organisation for Economic Co-operation and Development (OECD) (2011) defined it as "A combination of awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being" (p. 3).

Although Lusardi and Mitchell (2011) put more emphasis on the knowledge aspect while defining FL as "the knowledge of fundamental financial concepts and ability to do simple calculations" (pp. 1–2), they later (Lusardi & Mitchell, 2014) placed equal importance on both knowledge and decision-making skills while conceptualizing it as "people's ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt, and pensions" (p. 6). Their definition has changed, which highlights how crucial it is to define FL with both theoretical and practical aspects. Recent research revealed that FL is assessed in terms of both knowledge and application of perceived knowledge (Hanson & Olson, 2018). The present study has conceptualized FL in accordance with the definitions supplied by the OECD (2011).

Financial Socialization and Financial Literacy

Rampton (1995) defined socialization "as the process by which a person becomes a competent member of society or their social group" (p. 4). It is the process that enables individuals to become effective members of groups and society by acquiring the necessary knowledge, skills, and dispositions (Southerton, 2011). Social agents such as family, friends, peers, and media aid and facilitate the socialization process through active interactions. Families are the primary social agents enabling students to socialize with their surroundings. They will develop the understanding, abilities, and dispositions required to become competent social beings via their active involvement with their parents (Tang, 2017). Recent years have witnessed a sudden spike in studies focusing on the importance of family socialization during the early stages of a child's journey toward financial independence (Sharif & Naghavi, 2020; Shim et al., 2010).

Parents are considered the primary social agents in enabling children to become socialized in a financial environment among the various social agents (Shim et al., 2010; Tang, 2017). Zhao and Zhang (2020) and Anita and Kochhar (2024) found that family financial socialization enhanced adults' FL, financial behavior, and financial well-being. Similarly, students who have spoken to their parents about their spending habits, financial

investments, and the value of saving money are also shown to have desirable financial well-being (Utkarsh et al., 2020). Zhu (2018) also observed that parental socialization in terms of parental teaching and parental norms positively influenced adolescents' financial behavior through financial outcomes and attitudinal variables. The promotion of saving by parents during childhood has a positive effect on people's adult money management (Ammerman & Stueve, 2019).

Gudmunson and Danes (2011) proposed a family financial socialization model based on family socialization theory. Based on Gudmunson and Danes's (2011) model, various financial outcomes such as financial knowledge, financial attitude, financial behavior, and financial well-being are influenced by implicit (casual family interactions and relationships) and explicit (intentional efforts of family members) family financial socialization processes. The model also showed that the relationship between socio-demographic factors and students' financial outcomes is mediated by the family's implicit and explicit financial socialization processes. Gibby et al. (2021) observed that both implicit and explicit childhood financial socialization negatively influenced marital financial disagreement. Both parents' financial teaching (explicit) and financial behavior (implicit) enhanced students' financial behavior (Sharif et al., 2020). They also found that parents' financial behavior is not a significant predictor of students' FL, but parents' teaching leads to significant positive change in students' FL. Mahapatra et al. (2017) found that parents' financial behavior and teaching negatively impacted students' FL. Similarly, they also found that parents as financial role models caused students' lower FL.

Based on the family financial socialization model and findings of the literature review, we propose the following hypotheses:

- 🕏 **H1:** Parents' financial behavior has a significant positive influence on students' FL.
- 🕏 **H2:** Parents' teaching and influence have a significant positive influence on students' FL.
- \$\B\$: Considering parents as financial role models positively influences students' FL.

In addition to financial socialization factors, it is discovered that certain attributes of both parents and students affect the students' FL. Students of well-educated parents have higher FL (Mahapatra et al., 2017). Chambers et al. (2019) found that both mothers' and fathers' higher education qualifications helped students gain higher financial knowledge. In contrast, Ansong and Gyensare (2012) revealed that fathers' educational qualifications did not significantly predict students' FL, whereas mothers' education qualification predicted their FL significantly. Therefore, we hypothesize that:

\$\to\$ **H4:** Parents' education has a significant positive influence on students' FL.

Different academic disciplines have different FLs (Das, 2016; Kiliyanni & Sivaraman, 2016; Mahapatra et al., 2017). The FL level has been found to be higher among individuals who studied commerce, economics, management, and accounting/finance than those in other disciplines (Das, 2016; Kiliyanni & Sivaraman, 2016; Mahapatra et al., 2017). Similarly, individuals with higher-earning families also reported better FL than others (Agarwalla et al., 2015; Cole et al., 2011; Kadoya & Khan, 2020). In line with the above literature findings, we formulate the following two hypotheses:

- \$\Box \text{H5:} Students belonging to the commerce/management/economics discipline have higher FL.
- \$\Box\$ **H6:** Family income has a significant positive influence on students' FL.

Methodology

Data and Sampling

An empirical investigation has been conducted to examine the impact of parental socialization on student's FL. The analysis was performed using the data collected from 200 postgraduate (PG) students from the Central University of Tamil Nadu, India, selected through a multi-stage random sampling technique. There are 12 schools in the university, of which 10 have PG departments. These 10 schools were taken into consideration for the study because they exclusively focus on PG students. Out of the 10 departments, we chose the department with the greatest overall number of first- and second-year students from each institution. Finally, we selected 20 PG students (10 each from first and second years) from the chosen departments, constituting a sample size of 200. A systematic questionnaire was used to gather the primary data from the student respondents in March 2022.

Measures

The FL of the students has been measured using 21 items that have been adopted from Mahapatra et al. (2017), Kiliyanni and Sivaraman (2016), and OECD (2018). FL measures include 14 financial knowledge items, four financial behavior items, and three financial attitude items. Financial knowledge items are multiple-choice questions, whereas financial behavior and financial attitude are presented as a 5-point Likert scale. FL has a maximum score of 24 and a minimum score of 1, with financial knowledge, financial behavior, and financial attitude contributing maximum scores of 14, 5, and 5 (minimum scores of 0, 1, and 1), respectively. The parent(s) as a role model, the parent's financial behavior, and the parent's teaching and impact have all been measured using scales that were adopted from Shim et al. (2010). These three constructs, such as the parent's financial behavior, the parent's teaching and influence, and the parent (s) as a role model, are measured through a 5-point Likert scale with seven, five, and four items, respectively.

Tools for Analysis

We employed multiple linear regression (MLR) analysis with the ordinary least squares (OLS) method to determine the impact of various factors on students' FL. The analysis was done using the IBM SPSS software version 22. Most of the researchers, including Finke et al. (2016), Morgan and Trinh (2019), Philippas and Avdoulas (2020), and Utkarsh et al. (2020), employed the OLS method to identify the predictors of FL. As a result, we employed the OLS method to do the regression analysis. The regression equation is shown below:

$$fl_i = \alpha_0 + \beta_1 ad_i + \beta_2 fi_i + \beta_3 pfb_i + \beta_4 pti_i + \beta_5 prm_i + \beta_6 ped_i + \varepsilon_i \dots (1)$$

Here, we took the FL score (fl_i) as a dependent variable and academic discipline (ad_i), family income (fl_i), parents' financial behavior (pfb_i), parents' teaching and influence (pti_i), parents as role models (prm_i), and parents' highest educational qualification (ped_i), as independent variables. Independent factors are categorical, such as the parents' greatest level of education and family income. Therefore, we used dummy variables proportionate to the categories of each variable.

Furthermore, we used ANN analysis to identify the most important predictor of students' FL. An ANN is a computational model that, like neurons in the brain, identifies the correlated patterns between input data and the corresponding target value (Chakraborty & Goswami, 2017). The ANN model performs well in the presence of noise, outliers, and limited sample sizes (Hew & Kadir, 2016; Leong et al., 2020). Compared to traditional linear

models, ANN is free from various assumptions, such as linear relationships (Leong et al., 2020; Keng-Boon & Wei-Han, 2016; Sharma et al., 2015, 2017; Sharma & Sharma, 2019; Teo et al., 2015) and normal data distribution (Hew & Kadir, 2016; Leong et al., 2020; Teo et al., 2015). Since the current study has a small sample size, we used ANN along with MLR to ensure the robustness of the results. Using multilayer perceptrons in IBM SPSS 22, we performed neural network analysis by allocating 90% of the sample for training procedures and the remaining 10% for testing procedures (Leong et al., 2020; Sharma & Sharma, 2019). We have also carried out tenfold cross-validating methods and determined the root mean square of errors (RMSE) value, in line with the research of Leong et al. (2020) and Keng-Boon and Wei-Han (2016).

Analysis and Results

Descriptive Statistics

Table 1 summarizes the descriptive statistics. A total of 60.5% of the sample students belonged to the science discipline, followed by social science, law, and psychology (20%) and economics and management (19.5%). The monthly family income of 29.5% of the sample students ranged between ₹ 5,000 and ₹ 20,000. However, only 3% of the students' families earned less than ₹ 5,000 per month. At least one parent of around 40% of the students

Table 1. Descriptive Statistics

			Observations	Percentage
Academic Discipline	Social Science, Law, and I	40	20	
	Economics and Manag	gement	39	19.5
	Science	121	60.5	
	Total	200	100.0	
Monthly Family Income	Less than ₹ 5,00	00	6	3
	₹ 5,000 – ₹ 20,00	00	59	29.5
	₹ 20,000 - ₹ 35,0	00	46	23
	₹ 35,000 - ₹ 50,0	00	45	22.5
	More than ₹ 50,0	44	22	
	Total	200	100.0	
Parents' Highest Education Qualification:	No Formal Educat	18	9	
	Less than Matricula	30	15	
	Matriculation and Higher	Secondary	79	39.5
	Graduation/Vocational,	/Diploma	45	22.5
	Post-Graduation/Profession	onal/Others	28	14
	Total		200	100.0
	Mean	Std. Deviation	n Minimum	Maximum
Parents' Financial Behavior	3.91	0.610	1.71	5.00
Parents' Teaching and Influence	3.94	0.652	1.40	5.00
Parents as Role Models	3.85	0.645	1.50	5.00
Financial Literacy Score	12.91	2.887	7.00	21.75

possessed matriculation and higher secondary education. The students whose parents had no formal education account for only 9%.

Out of the maximum possible FL score of 24, the average score obtained by students was 12.91, and students correctly answered 53.8% of the questions. Compared to various studies on students' FL conducted across the world, such as Ergün (2018), Hanson and Olson (2018), and Kaur et al. (2015), the students in the current study have low levels of FL. The result aligns with the findings of various Indian studies that show that students/youth have a lower level of FL (Kiliyanni & Sivaraman, 2016, 2018).

Regression Results

Table 2 shows that the model (F: 3.36, p<0.01) predicts the student's FL significantly. The regression model is a good fit for the data since a significant difference exists among independent variables. The model predicts a 17.7% (R²: 0.177) change in students' FL levels. Parents' role models (H3) and instruction and influence (H2) are two of the independent variables that do not significantly affect pupils' FL levels.

Parents' desirable financial behavior (H1) makes a statistically significant desirable change in students' FL level. According to the model, there is a 1.351 unit rise in students' FL scores for every unit increase in parents'

Table 2. Regression Estimates

Predictor	Estimate	SE	t	р
Intercept	7.693	1.964	3.918	< 0.001
Parents' Financial Behavior	1.351	0.450	3.002	0.003***
Parents' Teaching and Influence	-0.210	0.436	-0.482	0.630
Parents as Role Models	-0.197	0.483	-0.409	0.683
Academic Discipline				
Economics and Management	(Reference)			
Social Science, Law, and Psychology	0.693	0.628	1.104	0.271
Science	-0.932	0.543	-1.716	0.088*
Monthly Family Income				
Less than ₹ 5,000	(Reference)			
₹ 5,000 – ₹ 20,000	1.972	1.186	1.663	0.098*
₹ 20,000 – ₹ 35,000	0.564	1.226	0.460	0.646
₹ 35,000 – ₹ 50,000	1.161	1.226	0.947	0.345
More than ₹ 50,000	1.119	1.277	0.876	0.382
Parents' Highest Education Qualification	n			
Below Matriculation	(Reference)			
Matriculation and Higher Secondary	1.100	0.523	2.104	0.037**
Graduation	0.488	0.637	0.766	0.444
Post-graduation and above	1.308	0.749	1.745	0.083*
R^2	0.177			
F	3.36			
Observations	200			

Note. ***, **, and * indicate estimates are significant at 1%, 5%, and 10% levels, respectively.

financial conduct. Like parents' financial behavior, parents' higher education qualification (H4) and higher earnings (H6) also lead to better FL among the students. Students of parents possessing the educational qualification of matriculation and higher secondary and post-graduation and above obtained higher points of 1.100 and 1.308, respectively, in FL scores than the students of parents possessing no formal education. Students with a monthly family income between ₹ 5,000 and ₹ 20,000 have a higher FL score of 1.972 than students with a monthly family income of less than ₹ 5,000. The findings of this study also support the hypothesis that there are differences in students' levels of FL across academic disciplines. Students of science discipline reported a 0.932 point lesser FL score than those studying economics and management.

ANN Results

The average RMSE values (Table 3) for the training and testing models are 0.129 and 0.137, respectively, which is in line with Leong et al. (2020), Keng-Boon and Wei-Han (2016), Sharma et al. (2017), and Teo et al. (2015). Since the RMSE value is smaller and close to one, the model fits and has a higher prediction accuracy.

The average relative importance and normalized relative importance (in percentage) obtained via sensitivity analysis are summarized in Table 4. The sensitivity analysis shows that parents' financial behavior is the most important predictor of students' FL.

Table 3. Neural Network Validation Results (RMSE Value)

Neural Networ	k	Training			Testing	
	Sample size	SSE	RMSE	Sample size	SSE	RMSE
1	180	3.569	0.141	20	0.535	0.164
2	178	2.940	0.129	22	0.401	0.135
3	182	3.039	0.129	18	0.282	0.125
4	175	2.722	0.125	25	0.284	0.107
5	180	3.276	0.135	20	0.281	0.119
6	177	2.908	0.128	23	0.833	0.190
7	179	3.064	0.131	21	0.377	0.134
8	179	2.810	0.125	21	0.344	0.128
9	170	2.739	0.127	30	0.686	0.151
10	179	2.772	0.124	21	0.268	0.113
Average	<u> </u>	2.984	0.129		0.429	0.137

Note. SSE: Sum square of errors and RMSE: Root mean square of errors.

Table 4. Sensitivity Analysis

Indepen Variable		t Neural Network									Importance	Normalized Importance
	1	2	3	4	5	6	7	8	9	10	•	
PFB	0.04	0.37	0.28	0.31	0.20	0.34	0.38	0.35	0.28	0.38	0.28	100%
PRM	0.20	0.09	0.28	0.13	0.13	0.03	0.27	0.02	0.20	0.06	0.15	53%
PI	0.21	0.23	0.03	0.09	0.20	0.14	0.07	0.08	0.25	0.18	0.14	51%
Edu 1	0.02	0.10	0.07	0.05	0.11	0.07	0.07	0.12	0.06	0.09	0.08	27%

FI 1	0.14	0.01	0.06	0.08	0.03	0.11	0.04	0.10	0.04	0.05	0.07	23%
Edu 2	0.11	0.04	0.04	0.06	0.07	0.07	0.02	0.08	0.02	0.02	0.06	19%
PEd 3	0.11	0.01	0.04	0.07	0.02	0.05	0.02	0.07	0.04	0.04	0.05	16%
PEd 1	0.02	0.07	0.04	0.07	0.03	0.05	0.04	0.06	0.01	0.06	0.04	16%
FI 2	0.03	0.03	0.06	0.05	0.02	0.06	0.04	0.09	0.03	0.05	0.04	16%
FI 4	0.01	0.01	0.05	0.05	0.06	0.04	0.03	0.01	0.05	0.02	0.03	12%
PEd 2	0.08	0.03	0.02	0.01	0.09	0.01	0.02	0.02	0.01	0.01	0.03	11%
FI 3	0.02	0.01	0.04	0.03	0.04	0.03	0.02	0.01	0.01	0.03	0.02	8%

Note. PFB: Parents Financial Behavior, PRM: Parents as a Role Models, PI: Parents' Teaching and Influence, Edu 1: Science, FI: ₹ 5,000 – 20,000, Edu 2: Social Science, Law and Psychology, PEd 3: Post-Graduation, PEd 1: Matriculation and Higher Secondary, FI 2: ₹ 20,000 – 35,000, FI 4: More than ₹ 50,000, PEd 2: Graduation and FI 3: ₹ 35,000 – 50,000

Discussion

Parents play a significant role in shaping a child's financial understanding, attitudes, and beliefs during their formative years (Ammerman & Stueve, 2019). The present study has examined how parents' financial socialization, both explicit (parents' financial teaching) and implicit (parents' financial behavior), shape children's FL. In addition, the study also examines how parents' education qualifications, family income, and students' academic disciplines are related to the FL level of the students. Our results indicate that students' FL is influenced by students' academic discipline, family income, parents' financial behavior, and educational qualifications. ANN analysis further reveals that parents' financial behavior is the most important factor in positively influencing students' FL. However, it has been discovered that parents' teaching and debating of money-related topics, as well as their role modeling in financial decisions, have little bearing on students' FL.

The results of the present study are contrary to that of earlier studies (Mahapatra et al., 2017; Sharif & Naghavi, 2020), which found that implicit financial socialization (financial behavior) had little or no effect on students' FL. Likely, Shim et al. (2010) observed that parental financial behavior significantly predicted their children's financial behavior but not their financial knowledge. The findings of the present study make it clear that students' FL increases as a result of the desirable financial behavior of their parents. Students' active observation of their parent's financial habits helps them to have a good financial understanding, attitude, and behavior. However, considering parents as financial role models does not impact students' FL. A study conducted by Mahapatra et al. (2017) revealed that considering parents as financial models leads to lower FL among students. Conversely, Shim et al. (2010) found that considering parents as financial role models helps children develop a positive financial attitude followed by sound financial behavior. The pupils replicate their parents' financial mistakes when they follow their parents' money habits blindly without seeing and assessing the constantly shifting financial environment. This leads to bad financial consequences for the students.

Contrary to earlier findings, the present study reveals that parents' explicit financial socialization does not significantly impact students' FL. However, an earlier study conducted by Sharif and Naghavi (2020) found that parents' teaching and discussions helped the students to possess a higher level of FL. Similarly, Shim et al. (2010) observed a greater scope for children to exhibit financial behavior similar to their parents when they get personal finance-related inputs from the direct teaching of their parents. Explicit parental socialization in childhood also helps individuals to have a positive financial attitude followed by desirable saving behavior during adulthood (Ammerman & Stueve, 2019). Meanwhile, Mahapatra et al. (2017) found a negative influence of parents' teaching and discussions on students' FL. Students' FL is significantly influenced by their observation and analysis of their parents' financial behavior but not by their parents' direct and intentional discussions about money-related matters.

Implications

The finding of the study that implicit parental socialization positively impacts students' FL aligns with social learning theory, as proposed by Albert Bandura. According to Bandura, individuals acquire new knowledge and behaviors through observation of others whom they perceive as important (Akers & Jennings, 2015). The results of this study support this notion by showing that adolescents learn FL from witnessing and participating in their parents' admirable financial behaviors.

The study's key findings show that implicit parental socialization has a considerable positive influence on students' FL, although explicit parental socialization did not. These findings have beneficial implications that can be utilized in practical situations. Since implicit parental socialization, which includes exhibiting good financial behavior and attitude among the parents, is keenly observed and followed by their children in real-life situations, it is important to provide proper financial education to the parents. The provision of financial education and the appropriate measures to improve the parents' level of FL will not only help the parents exhibit desirable financial behavior but also ensure students' financial freedom and financial well-being through appropriate and effective financial decisions. As parents can act as socialization agents, schools, NGOs, and community-based organizations might organize campaigns and conduct social outreach programs to impart financial education and counseling to parents. This kind of effort aims to enhance parents' financial capability, which will undoubtedly help the children to witness desirable financial behavior and attitude from their parents. Furthermore, it is equally important to ensure that students get appropriate instructions and counseling about money-related activities right from childhood, particularly during schooling, as the financial environment is becoming more complex day by day.

As higher educational qualifications of the parents lead to higher FL among the students, making the adult community more literate in terms of both general and FL is crucial to creating a financially confident and independent future generation. Furthermore, it is equally important to improve the digital FL of the adult community, as digital FL has the potential to play a crucial role in the digital economy.

People in general and students in particular from business, management, and economics-related fields outnumber their peers from other disciplines in terms of FL, which is consistent with the results of the current study. The main reason behind this difference is that commerce/management/economics students can have personal finance and accounting-related papers in their curriculum. Policymakers and academicians might consider offering personal finance-related papers in the curriculum, irrespective of the disciplines. Moreover, children should be taught money-related matters right from their schooling. Efforts to make the next generation financially literate from an early age would undoubtedly produce a financially responsible generation, which will, in turn, enable them to benefit greatly from the demographic dividend. The future generation is expected to be financially literate in order to possess the desired level of financial capability.

Limitations of the Study and Scope for Further Research

It is appropriate to highlight the limits of this study despite the fact that it makes a substantial contribution to the literature on parental socialization and kids' FL. First, the results may not be as broadly applicable as they may be due to the study's dependence on a small dataset and its concentration on students at a single university. This reiterates that caution should be exercised while applying the results to a broader population or context. Furthermore, the study did not explore the interdependent impact of both implicit and explicit parental socialization on students' FL. It may be possible to gain a more thorough knowledge of the combined impact of these two types of parental influence on FL promotion by analyzing their interactions. A sequential mode analysis with a larger sample size has a lot of room to grow in future studies. More research into the connection between

parental socialization—implicit and explicit—and how it affects students' FL would be possible with the help of this analysis.

The results of this study suggest that parents' financial behavior—more especially, implicit parental socialization—favors their kids' financial literacy. Future research might focus on the specific financial behaviors of the parents, such as savings, credit, cash, consumption behavior, etc., as this substantially impacts their children's FL. Youngsters closely watch their parents' financial habits and often imitate them. Since the effects of different parental financial behavior types may differ, research is required to determine how different parental financial behavior types affect children's financial literacy and well-being. In this scenario, a qualitative approach can be used to identify and categorize parents' different types of financial behaviors that significantly influence children's FL and capability.

As explicit parental socialization could not improve children's FL, researchers and policymakers must examine how the parents' intentional discussions and interactions can significantly change students' FL levels. It is essential, especially when parents act as primary social agents, who are mainly responsible for shaping the children's behavior and attitude. Future researchers can explore how children observe their parents' financial behavior and apply financial instructions learned from their parents in their financial decision-making process. Furthermore, it can also be investigated what kind of financial instructions from the parents are considered by the students while making financial decisions. The findings will result in designing effective financial education programs and counseling for parents to make their intentional financial discussions and interactions with their children more effective and fruitful.

Furthermore, studies on implicit and explicit financial socialization are essential to understanding how these influence various financial outcomes and their effectiveness. Various studies have found that implicit and explicit financial socialization influences students' FL and financial outcomes. In the future, studies may be undertaken to examine the impact of parental socialization on various financial outcomes such as financial attitude, financial behavior, and financial well-being by considering FL as a moderator. Future studies may also be carried out to understand how implicit and explicit parental financial socialization in childhood shapes the financial capability of an individual in adulthood.

Authors' Contribution

The first author, Dr. Rameshkumar Subramanian, conceptualized the research problem, and the second author, T. P. Arjun, collected and analyzed the data. Both authors together wrote the manuscript.

Conflict of Interest

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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References

Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2015). Financial literacy among working young in urban India. *World Development*, 67, 101–109. https://doi.org/10.1016/j.worlddev.2014.10.004

- Akers, R. L., & Jennings, W. G. (2015). Social learning theory. In A. R. Piquero (ed.), *The handbook of criminological theory* (pp. 230–240). John Wiley & Sons Inc. https://doi.org/10.1002/9781118512449.ch12
- Ali, A., Rahman, M. S., & Bakar, A. (2015). Financial satisfaction and the influence of financial literacy in Malaysia. *Social Indicators Research*, 120(1), 137–156. https://doi.org/10.1007/s11205-014-0583-0
- Ammerman, D. A., & Stueve, C. (2019). Childhood financial socialization and debt-related financial well-being indicators in adulthood. *Journal of Financial Counseling and Planning*, 30(2), 213–230. https://doi.org/10.1891/1052-3073.30.2.213
- Anita, & Kochhar, K. (2024). Family financial socialization: Impact of scholarship payments on research scholars' financial behaviour and financial well-being. *Indian Journal of Finance*, 18(3), 56–67. https://doi.org/10.17010/ijf/2024/v18i3/173617
- Ansong, A., & Gyensare, M. (2012). Determinants of university working-students' financial literacy at the University of Cape Coast, Ghana. *International Journal of Business and Management*, 7(9), 126–133. https://doi.org/10.5539/ijbm.v7n9p126
- Aprea, C., Wuttke, E., Breuer, K., Koh, N. K., Davies, P., Greimel-Fuhrmann, B., & Lopus, J. S. (2016). Financial literacy in the twenty-first century: An introduction to the international handbook of financial literacy. In *International handbook of financial literacy* (pp. 1–4). Springer. https://doi.org/10.1007/978-981-10-0360-8 1
- Arjun, T. P., & Subramanian, R. (2024). Defining and measuring financial literacy in the Indian context: A systematic literature review. *Managerial Finance*, 50(7), 1247–1269. https://doi.org/10.1108/MF-08-2022-0358
- Baker, H. K., Kumar, S., & Pandey, N. (2021). Five decades of the *Journal of Consumer Affairs:* A bibliometric analysis. *Journal of Consumer Affairs*, 55(1), 293–331. https://doi.org/10.1111/joca.12347
- Bhonde-Saraf, A. (2016). Are women financially educated? A study with reference to earning women of Aurangabad district, Maharashtra. *Indian Journal of Finance*, 10(3), 43-51. https://doi.org/10.17010/ijf/2016/v10i3/89021
- Chakraborty, A., & Goswami, D. (2017). Prediction of slope stability using multiple linear regression (MLR) and artificial neural network (ANN). *Arabian Journal of Geosciences*, 10(17), Article No. 385. https://doi.org/10.1007/s12517-017-3167-x
- Chambers, R. G., Asarta, C. J., & Farley-Ripple, E. N. (2019). Gender, parental characteristics, and financial knowledge of high school students: Evidence from multicountry data. *Journal of Financial Counseling and Planning*, 30(1), 97–109. https://doi.org/10.1891/1052-3073.30.1.97
- Cole, S., Sampson, T., & Zia, B. (2011). Prices or knowledge? What drives demand for financial services in emerging markets? *The Journal of Finance*, 66(6), 1933–1967. https://doi.org/10.1111/j.1540-6261.2011.01696.x
- Danes, S. M., & Yang, Y. (2014). Assessment of the use of theories within the *Journal of Financial Counseling* and Planning and the contribution of the family financial socialization conceptual model. *Journal of Financial Counseling and Planning*, 25(1), 53–68.
- Das, S. C. (2016). Financial literacy among Indian millennial generation and their reflections on financial behaviour and attitude: An explanatory research. *The Indian Journal of Commerce*, 69(4). https://www.researchgate.net/publication/320009228

- Ergün, K. (2018). Financial literacy among university students: A study in eight European countries. *International Journal of Consumer Studies*, 42(1), 2–15. https://doi.org/10.1111/ijcs.12408
- Finke, M. S., Howe, J. S., & Huston, S. J. (2016). Old age and the decline in financial literacy. *Management Science*, 63(1), 213–230. https://doi.org/10.1287/mnsc.2015.2293
- Garg, N., & Singh, S. (2018). Financial literacy among youth. *International Journal of Social Economics*, 45(1), 173–186. https://doi.org/10.1108/IJSE-11-2016-0303
- Gibby, A. L., Pettit, L., Hill, E. J., Yorgason, J., & Holmes, E. K. (2021). Implicit and explicit childhood financial socialization: Protective factors for marital financial disagreements. *Journal of Family and Economic Issues*, 42(2), 225–236. https://doi.org/10.1007/s10834-020-09695-8
- Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45(1), 80–105. https://doi.org/10.1111/ijcs.12605
- Gudmunson, C. G., & Danes, S. M. (2011). Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues*, 32(4), 644–667. https://doi.org/10.1007/s10834-011-9275-y
- Hanson, T. A., & Olson, P. M. (2018). Financial literacy and family communication patterns. *Journal of Behavioral and Experimental Finance*, *19*, 64–71. https://doi.org/10.1016/j.jbef.2018.05.001
- Hew, T.-S., & Kadir, S. L. (2016). Predicting instructional effectiveness of cloud-based virtual learning environment. *Industrial Management & Data Systems*, 116(8), 1557–1584. https://doi.org/10.1108/IMDS-11-2015-0475
- Jayaraman, J., & Jambunathan, S. (2018). Financial literacy among high school students: Evidence from India. Citizenship, Social and Economics Education, 17(3), 168-187. https://doi.org/10.1177/2047173418809712
- Jorgensen, B. L., & Savla, J. (2010). Financial literacy of young adults: The importance of parental socialization. Family Relations, 59(4), 465–478. https://doi.org/10.1111/j.1741-3729.2010.00616.x
- Jump\$tart Coalition. (2007). *National standards in K–12 personal finance education: With benchmarks, knowledge statements, and glossary* (3rd ed.). Personal Finance Literacy. https://www.schwab.com/public/file/P-4041374/standardbook rev-ALL-B.pdf
- Kadoya, Y., & Khan, M. S. (2020). What determines financial literacy in Japan? *Journal of Pension Economics and Finance*, 19(3), 353–371. https://doi.org/10.1017/S1474747218000379
- Kapoor, S., & Mohandas, V. (2023). Measuring financial inclusion in India: An approach. *Indian Journal of Finance*, 17(1), 27–46. https://doi.org/10.17010/ijf/2023/v17i1/172601
- Kaur, M., Vohra, T., & Arora, A. (2015). Financial literacy among university students: A study of Guru Nanak Dev University, Amritsar, Punjab. Asia-Pacific Journal of Management Research and Innovation, 11(2), 143–152. https://doi.org/10.1177/2319510x15576178
- Kavita, & Suman. (2019). Determinants of financial inclusion in India: A literature review. *Indian Journal of Finance*, 13(11), 53–61. https://doi.org/10.17010/ijf/2019/v13i11/148417
- Keng-Boon, O., & Wei-Han, T. G. (2016). Mobile technology acceptance model: An investigation using mobile users to explore smartphone credit card. *Expert Systems with Applications*, 59, 33–46. https://doi.org/10.1016/j.eswa.2016.04.015
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- Khongwir, C. M., & Sharmiladevi, J. C. (2023). A bibliometric analysis on financial inclusion and financial literacy—Analyzing the current research trends. *Indian Journal of Finance*, 17(2), 27–53. https://doi.org/10.17010/ijf/2023/v17i2/172638
- Kiliyanni, A. L., & Sivaraman, S. (2016). The perception-reality gap in financial literacy: Evidence from the most literate state in India. *International Review of Economics Education*, 23, 47–64. https://doi.org/10.1016/j.iree.2016.07.001
- Kiliyanni, A. L., & Sivaraman, S. (2018). A predictive model for financial literacy among the educated youth in Kerala, India. *Journal of Social Service Research*, 44(4), 537-547. https://doi.org/10.1080/01488376.2018.1477699
- Leong, L.-Y., Hew, T. S., Ooi, K. B., & Wei, J. (2020). Predicting mobile wallet resistance: A two-staged structural equation modeling-artificial neural network approach. *International Journal of Information Management*, *51*, 102047. https://doi.org/10.1016/j.ijinfomgt.2019.102047
- Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and retirement planning in the United States. *Journal of Pension Economics & Finance*, 4(10), 509–525. https://doi.org/10.1017/S147474721100045X
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44. https://doi.org/10.1257/jel.52.1.5
- Mahapatra, M. S., Alok, S., & Raveendran, J. (2017). Financial literacy of Indian youth: A study on the twin cities of Hyderabad–Secunderabad. *IIM Kozhikode Society & Management Review*, 6(2), 132–147. https://doi.org/10.1177/2277975216667096
- Mirabile, S. P., Oertwig, D., & Halberstadt, A. G. (2018). Parent emotion socialization and children's socioemotional adjustment: When is supportiveness no longer supportive? *Social Development*, 27(3), 466–481. https://doi.org/10.1111/sode.12226
- Morgan, P. J., & Trinh, L. Q. (2019). Determinants and impacts of financial literacy in Cambodia and Vietnam. *Journal of Risk and Financial Management*, 12(1), 19. https://doi.org/10.3390/jrfm12010019
- Mudzingiri, C., Mwamba, J. W., & Keyser, J. N. (2018). Financial behavior, confidence, risk preferences and financial literacy of university students. *Cogent Economics & Finance*, 6(1), 1512366. https://doi.org/10.1080/23322039.2018.1512366
- Nag, A. K., & Shah, J. (2022). An empirical study on the impact of Gen Z investors' financial literacy to invest in the Indian stock market. Indian Journal of Finance, 16(10), 43-59. https://doi.org/10.17010/ijf/2022/v16i10/172387
- Noctor, M., Stoney, S., & Stradling, R. (1992). Financial literacy: A report prepared for the National Westminster Bank, London. *IOSR Journal of Business and Management*, 18(08), 139–142.
- Oehler, A., Horn, M., Wendt, S., Reisch, L. A., & Walker, T. J. (2018). Young adults and their finances: An international comparative study on applied financial literacy. *Economic Notes*, 47(2–3), 305–330. https://doi.org/10.1111/ecno.12110
- OECD. (2011). Measuring financial literacy: Questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy. OECD Publishing.

- OECD. (2018). *OECD/INFE Toolkit for measuring financial literacy and financial inclusion*. OECD Publishing. http://www.oecd.org/financial/education/2018-INFE-FinLit-Measurement-Toolkit.pdf
- Paul, J., & Bhukya, R. (2021). Forty-five years of *International Journal of Consumer Studies*: A bibliometric review and directions for future research. *International Journal of Consumer Studies*, 45(5), 937–963. https://doi.org/10.1111/ijcs.12727
- Philippas, N. D., & Avdoulas, C. (2020). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *The European Journal of Finance*, 26(4–5), 360–381. https://doi.org/10.1080/1351847X.2019.1701512
- Rampton, B. (1995). Language crossing and the problematisation of ethnicity and socialisation. *Pragmatics*, *5*(4), 485–513. https://doi.org/10.1075/prag.5.4.04ram
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *The Journal of Consumer Affairs*, 44(2), 276–295. https://doi.org/10.1111/j.1745-6606.2010.01169.x
- Saptono, L., Soetjipto, B. E., Wahjoedi, & Wahyono, H. (2019). The influence of financial quantitative literacy and subjective numeracy on impulsive consumption with materialism as the mediator variable. *Indian Journal of Marketing*, 49(10), 23–41. https://doi.org/10.17010/ijom/2019/v49/i10/147563
- Sehrawat, K., & Vij, M. (2020). Financial wellbeing among public and private sector employees: A preliminary study. *Indian Journal of Finance*, 14(1), 9–28. https://doi.org/10.17010/ijf/2020/v14i1/149855
- Seotsanyana, M. E. (2019). Assessment of university students' level of financial literacy: The voices of the National University of Development Studies education students. *Africa Review*, *11*(1), 63–76.
- Sharif, S. P., & Naghavi, N. (2020). Family financial socialization, financial information seeking behavior and financial literacy among youth. *Asia-Pacific Journal of Business Administration*, 12(2), 163–181. https://doi.org/10.1108/APJBA-09-2019-0196
- Sharif, S. P., Ahadzadeh, A. S., & Turner, J. J. (2020). Gender differences in financial literacy and financial behaviour among young adults: The role of parents and information seeking. *Journal of Family and Economic Issues*, 41(4), 672–690. https://doi.org/10.1007/s10834-020-09674-z
- Sharma, S. K., & Sharma, M. (2019). Examining the role of trust and quality dimensions in the actual usage of mobile banking services: An empirical investigation. *International Journal of Information Management*, 44, 65–75. https://doi.org/10.1016/j.ijinfomgt.2018.09.013
- Sharma, S. K., Gaur, A., Saddikuti, V., & Rastogi, A. (2017). Structural equation model (SEM)-neural network (NN) model for predicting quality determinants of e-learning management systems. *Behaviour & Information Technology*, 36(10), 1053–1066. https://doi.org/10.1080/0144929X.2017.1340973
- Sharma, S. K., Govindaluri, S. M., & Al Balushi, S. M. (2015). Predicting determinants of Internet banking adoption: A two-staged regression-neural network approach. *Management Research Review*, *38*(7), 750–766. https://doi.org/10.1108/MRR-06-2014-0139
- Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of Youth and Adolescence*, *39*, 1457–1470. https://doi.org/10.1007/s10964-009-9432-x

- Southerton, D. (2011). Consumer socialization. In Encyclopedia of consumer culture (Vol. 3, pp. 319–320). SAGE Publications, Inc. https://doi.org/10.4135/9781412994248
- Tandon, P., & Singh, A. B. (2021). Antecedents and extent of financial inclusion: A cross-sectional study. *Indian* Journal of Finance, 15(3), 50–67. https://doi.org/10.17010/ijf/2021/v15i3/158129
- Tang, N. (2017). Like father like son: How does parents' financial behavior affect their children's financial behavior? The Journal of Consumer Affairs, 51(2), 284–311. https://doi.org/10.1111/joca.12122
- Teo, A.-C., Tan, G. W.-H., Ooi, K.-B., Hew, T.-S., & Yew, K.-T. (2015). The effects of convenience and speed in mpayment. Industrial Management & Data Systems, 115(2), 311–331.
- Utkarsh, Pandey, A., Ashta, A., Spiegelman, E., & Sutan, A. (2020). Catch them young: Impact of financial socialization, financial literacy and attitude towards money on financial well-being of young adults. International Journal of Consumer Studies, 44(6), 531–541. https://doi.org/10.1111/ijcs.12583
- Vaghela, P. S., Kapadia, J. M., Patel, H. R., & Patil, A. G. (2023). Effect of financial literacy and attitude on financial behavior among university students. Indian Journal of Finance, 17(8), 43-57. https://doi.org/10.17010/ijf/2023/v17i8/173010
- Zhao, H., & Zhang, L. (2020). Talking money at home: The value of family financial socialization. *International* Journal of Bank Marketing, 38(7), 1617–1634. https://doi.org/10.1108/IJBM-04-2020-0174
- Zhu, A. Y. (2018). Parental socialization and financial capability among Chinese adolescents in Hong Kong. Journal of Family and Economic Issues, 39(4), 566–576. https://doi.org/10.1007/s10834-018-9584-5

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