International Journal of Science, Environment and Technology, Vol. 15, No 3, 2026, 141 – 148

ISSN 2278-3687 (O)
2277-663X (P)

USAGE AND PERCEPTION OF UPI-BASED DIGITAL PAYMENT SYSTEMS AMONG COLLEGE STUDENTS: A PILOT STUDY FROM PUDUCHERRY, INDIA

M. Thamizhselvi[1*] and M. Janaki Rama[2]
[1]Assistant Professor, [2]Associate Professor & Head
PG Department of Commerce, School of Arts and Science,
Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry-605107
E-mail: thamizhselvi.m@gmail.com (**Corresponding Author*)

Abstract: The rapid growth of digital payment systems has significantly transformed financial transaction behaviour in India, with the Unified Payments Interface (UPI) emerging as the most widely adopted platform. This pilot study examines the usage patterns and perception of UPI-based digital payment systems among college students in Puducherry. Primary data were collected from 93 undergraduate and postgraduate students using a structured questionnaire covering demographic characteristics, awareness, adoption, usage behaviour, and perception toward UPI. The study employs descriptive statistical tools such as frequency and percentage analysis. The findings reveal universal awareness of UPI among students, with Google Pay being the most preferred application. A majority of respondents use UPI daily or several times a week, primarily for mobile recharges, bill payments, and peer-to-peer transfers involving low to medium transaction values. Students perceive UPI as convenient and easy to use, with a generally high level of trust, although concerns regarding security and data privacy persist. Peer and family influence plays a crucial role in awareness and adoption. As a pilot study, the results provide preliminary insights into student behaviour and highlight the growing importance of UPI in fostering a cashless economy. The study underscores the need for continued digital financial literacy and enhanced security measures to ensure safe and sustainable usage of UPI among young users.

Keywords: Digital Payment, Perception, UPI, Transactions, Students.

INTRODUCTION

The transformation of financial services through digitalization has reshaped how individuals and businesses conduct transactions. In India, the introduction of the Unified Payments Interface (UPI) in 2016 by the National Payments Corporation of India (NPCI) has marked a revolutionary step toward seamless, secure, and real-time money transfers. Unlike traditional banking methods or even early e-wallets, UPI provides interoperability between banks and instant fund transfers, making it a preferred choice for millions of users. Among young adults, particularly college students, the adoption of UPI has been remarkably high as

*Received April 5, 2026 * Published June 2, 2026 * www.ijset.net*

reported by Kumar and Mohan (2022). The youth segment is more technology-oriented, receptive to innovation, and tends to prefer quick and hassle-free modes of payment. For students, UPI has replaced cash transactions for purposes such as paying bills, recharging mobile services, transferring funds among peers, and making small-value online purchases. Despite the increasing reliance on UPI, challenges such as transaction failures, fraud risks, and concerns over data privacy persist. Understanding the perceptions, preferences, and usage behaviour of students is essential, as they represent a demographic that will continue to drive the growth of digital payments in the coming years. This paper aims to analyze the awareness, adoption, and perception of UPI-based digital payments among college students in Puducherry, drawing insights into the opportunities and challenges in their digital payment journey.

Hence the study was designed with the following objectives:

- To examine the level of awareness of UPI-based digital payment systems among college students
- To study the usage patterns of UPI, including frequency, purpose, and transaction amounts
- To identify the preferred UPI applications used by students
- To suggest measures to improve adoption and secure usage of UPI among young adults

Previous Reports in India: Jariwala and Samal (2025) reported from a study conducted in 82 respondents of Surat district, India that gender does not exhibit a substantial influence on either perception or satisfaction levels regarding UPI payments, while the habit of dealing in cash persists among both genders with no statistically significant link to gender specific attitudes toward digital transactions in Surat, India.

Sharma and Singh (2024) examined digital payment behaviour among college students in post-pandemic India. Their study found a significant increase in UPI usage frequency after COVID-19, with students preferring cashless payments for everyday transactions. Security awareness and digital literacy were identified as crucial for sustainable adoption.

Reserve Bank of India (RBI, 2024) highlighted in its annual report that UPI continues to drive financial inclusion by providing low-cost, real-time payment solutions. The report stressed the importance of user education on cyber hygiene to mitigate fraud and ensure safe digital transactions.

Patel and Mehta (2024) investigated the challenges faced by youth in adopting digital payment platforms. While ease of access and convenience encouraged usage, the study found that lack of awareness about complaint resolution mechanisms and fear of cyber fraud restricted full-scale trust among students.

National Payments Corporation of India (NPCI, 2023) reported that UPI recorded more than 12 billion transactions in a single year, making it the most widely used digital payment platform in India. The report emphasized that students and young professionals constitute a major share of UPI users due to their familiarity with mobile-based technologies.

Kumar and Mohan (2022) examined the factors influencing the adoption of digital payment systems among youth in India. Their study identified smartphone penetration, low-cost internet access, and government-led initiatives such as Digital India as the primary drivers of digital payment usage. The authors concluded that UPI has been particularly successful in urban and semi-urban regions due to its ease of use and interoperability across banks.

Kaur and Arora (2021) studied the adoption of UPI among university students in North India and found that convenience, speed, and low transaction costs were the most influential factors. However, concerns related to transaction failures and fraud risks were identified as key barriers affecting complete trust in digital payments.

Mahesh and Bhat (2021) reported that 'Digital Payment Service in India - A Case Study of Unified Payment Interface' which revealed the significant growth in digital payments, particularly in the retail sector on the UPI platform in India.

Sinha and Verma (2021) analysed the role of trust and security in mobile payment adoption. The study revealed that although convenience and speed encourage initial usage, sustained adoption largely depends on users' confidence in transaction security, data protection, and grievance redressal mechanisms. The authors emphasized the need for strengthening cybersecurity frameworks to retain user trust.

Rao and Agarwal (2021) explored the influence of social factors on the adoption of mobile payment systems among college students. Their findings indicated that peer influence, family recommendations, and social networks play a significant role in shaping students' payment choices. Promotional incentives such as cashback offers and discounts were also found to positively influence usage frequency.

Dahlberg et al. (2015) conducted a comprehensive review of mobile payment research and observed that perceived usefulness, ease of use and compatibility with users' lifestyle significantly affect digital payment adoption. The study highlighted that young consumers are more receptive to mobile payment technologies compared to older age groups.

Research gap: From the above reports, it is evident that while several studies have examined digital payment adoption and UPI usage in India, limited empirical research focuses specifically on the usage behaviour and perception of UPI among college students in Puducherry. Moreover, there is a need for pilot-level studies that provide localized insights into awareness, trust, and challenges faced by young users. The present study attempts to bridge this gap.

MATERIALS AND METHODS

The study followed a descriptive survey research design to collect primary data on UPI usage among college students. **Population and Sample size**: The study was conducted among undergraduate and postgraduate students in Puducherry. A sample size of 93 students was selected using convenience sampling. **Instrument**: A structured questionnaire was designed, comprising questions on demographic details, awareness, adoption, usage behavior, perception, and challenges faced in UPI transactions.

Data Collection: Both online and offline survey methods were used to reach respondents. Participation was voluntary. **Data Analysis**: The data collected were analyzed using descriptive statistics, such as frequency distribution and percentage analysis, to interpret students' responses.

RESULTS AND DISCUSSION

The results or responses of the various events held among the college students are given in these table formats below.

Table 1: Gender-wise Distribution of Respondents

Gender	Number of Respondents	Percentage (%)
Male	38	40.9
Female	55	59.1
Total	**93**	**100.0**

The table 1 shows that female students (59.1%) constitute a higher proportion of the respondents compared to male students (40.9%). This indicates greater participation of female students in the survey and reflects their active involvement in digital payment usage.

Table 2: Age-wise Distribution of Respondents

Age Group (Years)	Number of Respondents	Percentage (%)
18 – 20	22	23.7
21 – 23	50	53.8
Above 23	21	22.6
Total	**93**	**100.0**

The table 2: It is observed that the majority of respondents (53.8%) fall in the age group of 21–23 years, followed by 18–20 years (23.7%). This indicates that students in their early twenties are the most active users of UPI-based digital payment systems.

Table 3: Source of Awareness about UPI

Source of Awareness	Number of Respondents	Percentage (%)
Friends & Family	73	78.5
Social Media	13	14.0
Advertisements	6	6.5
College Workshop	1	1.1
Total	**93**	**100.0**

The table 3 reveals that friends and family are the major source of awareness about UPI, accounting for 78.5% of responses. Social media also plays a notable role. Institutional initiatives such as college workshops have contributed minimally, indicating scope for educational institutions to enhance awareness programs.

Table 4: Preferred UPI Application Used by Students

UPI Application	Number of Respondents	Percentage (%)
Google Pay	84	90.3
PhonePe	3	3.2
Paytm	2	2.2
Amazon Pay	2	2.2
Navi UPI	1	1.1
SuperMoney	1	1.1
Total	**93**	**100.0**

The table 4 data clearly indicate the dominance of Google Pay, which is used by 90.3% of students. Other UPI applications have marginal usage. This highlights the importance of user-friendly interface, brand trust, and promotional strategies in influencing app preference.

Table 5: Duration of Using UPI-based Digital Payments

Duration	Number of Respondents	Percentage (%)
Less than 6 months	2	2.2
6 months – 1 year	4	4.3
1 – 2 years	22	23.7
More than 2 years	65	69.9
Total	**93**	**100.0**

In the table 5: A large majority of students (69.9%) have been using UPI for more than two years, indicating sustained adoption and familiarity with digital payment systems. This reflects the maturity of UPI usage among college students.

Table 6: Frequency of UPI Usage

Usage Frequency	Number of Respondents	Percentage (%)
Daily	51	54.8
Few times a week	35	37.6
Few times a month	6	6.5
Rarely	1	1.1
Total	**93**	**100.0**

The table 6 shows that more than half of the respondents (54.8%) use UPI daily, followed by 37.6% who use it a few times a week. This demonstrates that UPI has become an integral part of students' day-to-day financial transactions.

Table 7: Purpose of Using UPI

Purpose	Number of Respondents	Percentage (%)
Recharge & Bill Payments	31	33.3
Money Transfer (Friends/Family)	29	31.2
Online Shopping	17	18.3
Other Uses	16	17.2
Total	**93**	**100.0**

In the table 7: UPI is primarily used for recharge and bill payments (33.3%) and money transfers among friends and family (31.2%). This indicates that students mainly rely on UPI for routine and peer-to-peer transactions rather than high-value purchases.

Table 8: Monthly Amount Spent through UPI

Monthly Transaction Amount	Number of Respondents	Percentage (%)
Less than ₹2,000	28	30.1
₹2,000 – ₹5,000	40	43.0
₹5,000 – ₹10,000	19	20.4
Above ₹10,000	6	6.5
Total	**93**	**100.0**

In the table 8: The majority of students (43%) spend between ₹2,000 and ₹5,000 per month using UPI, followed by 30.1% who spend less than ₹2,000. This confirms that UPI is mainly used for low-to-medium value transactions among students.

Table 9: Level of Trust in UPI-based Digital Payments

Level of Trust	Percentage (%)
High Trust	39.8
Moderate Trust	45.2
Low Trust	15.0
Total	**100.0**

The table 9 indicates that a majority of students have either high (39.8%) or moderate (45.2%) trust in UPI-based digital payments. However, 15% of respondents exhibit low trust, highlighting concerns related to security and privacy that need to be addressed.

- ***Demographics***: Out of 93 respondents, 55 (59.1%) were female and 38 (40.9%) were male. The majority were aged between 21–23 years (53.8%).

- ***Awareness***: All respondents (100%) were aware of UPI-based digital payments. Sources of awareness included friends and family (78.5%), social media (14%), advertisements (6.5%), and college workshops (1.1%).
- ***App Preferences***: Google Pay emerged as the dominant application, used by 90.3% of students. PhonePe, Paytm, and Amazon Pay had marginal shares.
- ***Usage Frequency***: More than half (54.8%) reported using UPI daily, while 37.6% used it a few times per week.
- ***Transaction Purposes***: Common purposes included mobile recharges and bill payments (33.3%), transferring money among friends/family (31.2%), and online shopping (18.3%).
- ***Transaction Amounts***: 43% spent between Rs.2000–5000 monthly through UPI, followed by 30.1% who spent less than Rs.2000.
- ***Perception***: Students rated UPI highly for ease of use (average score of 4/5). While 39.8% expressed high trust, 45.2% indicated moderate trust levels.

***Findings*:**

- UPI has achieved universal awareness among the surveyed students.
- Google Pay is the most dominant app, significantly ahead of other platforms.
- Students use UPI for low-to-medium value transactions such as recharges, utility payments, and peer-to-peer transfers.
- Peer and family influence play a central role in spreading awareness.
- Trust in UPI is generally high, though some students remain cautious about fraud risks and data privacy.

***Suggestions*:**

- Colleges should conduct digital financial literacy workshops to promote safe online payment practices.
- App developers and banks must strengthen security features, including biometric verification and real-time fraud alerts.
- Students should be encouraged to use official channels for grievance redressal in case of transaction failures.
- Cashback and reward-based promotions can further enhance adoption and sustained usage among youth.
- Government agencies can collaborate with educational institutions to spread awareness on cyber hygiene and digital financial inclusion.

CONCLUSION

This study highlights the deep penetration of UPI among college students in Puducherry, with universal awareness and widespread adoption. The preference for Google Pay reflects the importance of user interface and promotional offers in shaping consumer behaviour. Students perceive UPI as a convenient, trustworthy, and efficient tool for financial transactions, though security concerns require continued attention. As India progresses toward a cashless economy, the role of young adults in embracing and promoting digital payments will be crucial. With the right balance of technological innovation, user education and strong regulatory safeguards, UPI is set to remain the backbone of India's digital payment ecosystem.

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