Security Concerns in Digital Payments: An Overview

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ARTICLE INFO	ABSTRACT
	The rapid rise in technology has transformed the way payments are made. The digital payment covers a wide array of digital payment methods from contactless payment solutions to mobile apps for consumers and businesses. Despite the many benefits of digital payment, there are also real security concerns that must be addressed. From data breaches and fishing scams to fraudulent activities and malware attacks, these security issues of digital payment pose a significant risk to users. As we increasingly rely on digital payments we must take steps to ensure that these transactions are secure. Without proper security measures users face the risk. This paper provides an overview of the security concerns of users in digital payment. **Keywords:** Digital payments, security concerns, fraudulent activities, users.

I. INTRODUCTION

Digital payment have evolved tremendously over the past few years. The impact of COVID-19 has further accelerated the shift in payment preferences, partly because of convenience, and partly because of the advice and emphasis to avoid physical cash where possible. Regardless of the reasoning, digital payments are not disappearing, and are only going to increase in popularity over the years to come. Cards are currently the preferred choice of payments around the world, Surpassing physical cash, yet mobile wallets are quickly gaining mass popularity. Digital payment security is more important today than ever before due to the increasing amount of financial transactions that occur online. As more people adopt digital payment methods, such as online banking, mobile payments, and e-commerce transactions, the potential for fraud and identity theft also increases. Without proper security measures in place, individuals and businesses face the risk of financial loss, the theft of sensitive information, and damage to reputation and trust

Security concerns is probably the most critical factor that influences negatively the prospective customers who make payment electronically. Every channel of e-payment has its security problems, but it may be argued that when somebody concerns about security in e-payment, then the first that comes to his/her mind is the Internet. This is substantiated by the numerous articles in the press concerning Internet security breaches. People see and hear everywhere about hackers, fraud, crackers, computer viruses, identity theft, phishing attacks, spyware, malware, and many other terms that refer to security issues regarding the Internet. Nevertheless, it is not only the Internet that is fraught with security breaches. There are numerous incidents. Regarding frauds through the use of fake ATM cards or cases of theft of identity data through the infiltration of inadequately guarded information systems. The incidence of ATM, credit, debit card and net banking-related fraud has also gone up.

II. RESEARCH METHODOLOGY

2.1 Objectives of the Study:
 i. To investigate how users perceive security risks in digital payments and how their behavior is influenced by these perceptions.
 ii.   To address the security concerns amongst users.
iii.   To identify security concerns of users.

2.2 Primary Data:
• Primary data was collected through a questionnaire which was administered through a Google form administered to 120 respondents of different age and class groups in Goa

2.3 Secondary Data:

• Secondary data was obtained from published sources in the academic libraries, websites newspapers, magazine etc.

2.4 Scope of the Study

The purpose of the paper is to study how there is an increasing need to address security concerns of users as there is a transition to digital payment, bearing in mind, the Pandemic which resulted in a shift to digital payments. For the purpose of study surveys were conducted across the state of Goa that included people from business class, working class and students.

III DATA ANALYSIS AND INTERPRETATION

3.1 Security In Digital Payments

It is observed from the bar graph of 120 respondents, 62.50% feel secure while using digital payments. While 30% cannot say whether they feel secure or not. Whereas 7.50% do not feel secure while using digital payments. It can be concluded that a majority of the respondents feel secure while using digital payments.

GRAPH NO.3.1 SECURITY IN DIGITAL PAYMENTS

SECURITY IN DIGITAL PAYMENTS

Yes	62.50%
No	7.50%
Cannot Say	30.00%
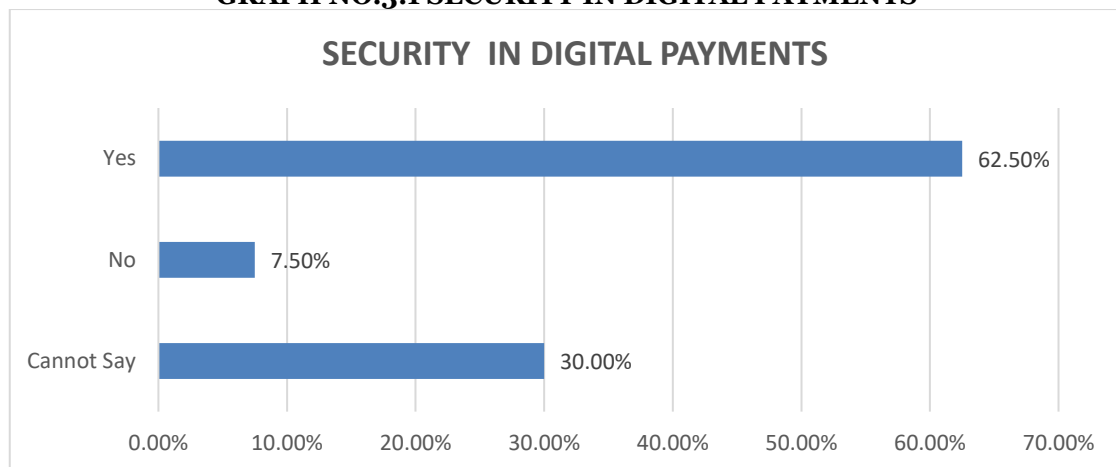
3.2 Comfort in making large payments using digital payment

It is observed from the bar graph of the 120 respondents, 39.17% of people are comfortable with making large digital payments, 35% are not comfortable making large digital payments and only 25.83% cannot say whether they are comfortable or not. It can be concluded that majority of digital payment users are comfortable making large digital payments but not by a significant margin of respondents.

GRAPH NO.3.2 COMFORT IN MAKING LARGE PAYMENTS USING DIGITAL PAYMENT

COMFORT IN MAKING LARGE PAYMENTS USING DIGITAL PAYMENT

Yes	39.17%
No	35.00%
Cannot Say	25.83%
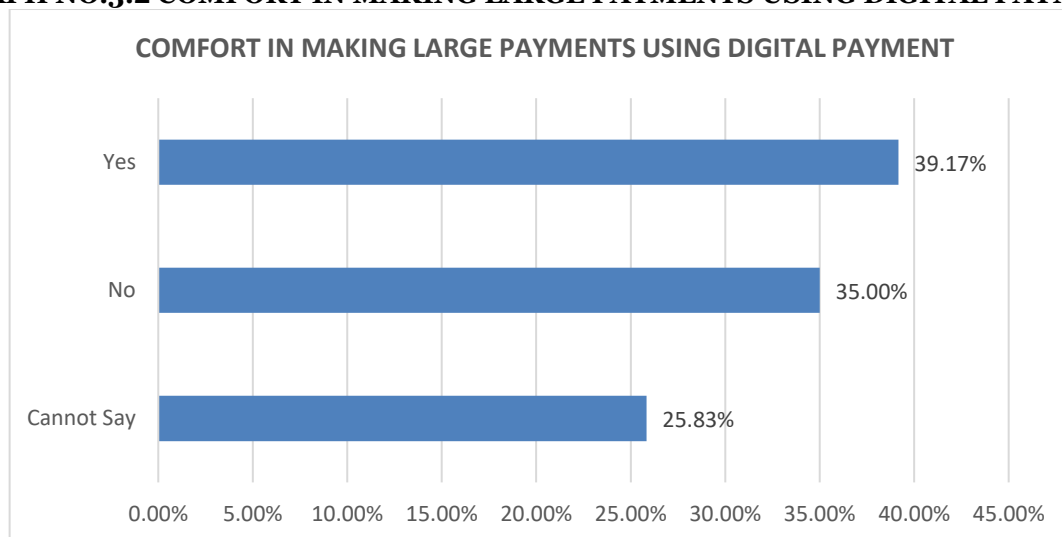
3.3 Loss of money due to digital fraud

It is observed from the bar graph that of the 120 respondents, 93.33% have never lost money due to digital fraud and only 6.67% have lost money due to digital fraud. It can be concluded that majority of digital payment users did not face digital fraud.

GRAPH NO.3.3 LOSS OF MONEY DUE TO DIGITAL FRAUD

LOSS OF MONEY DUE TO DIGITAL FRAUD

Yes — 6.67%
No — 93.33%
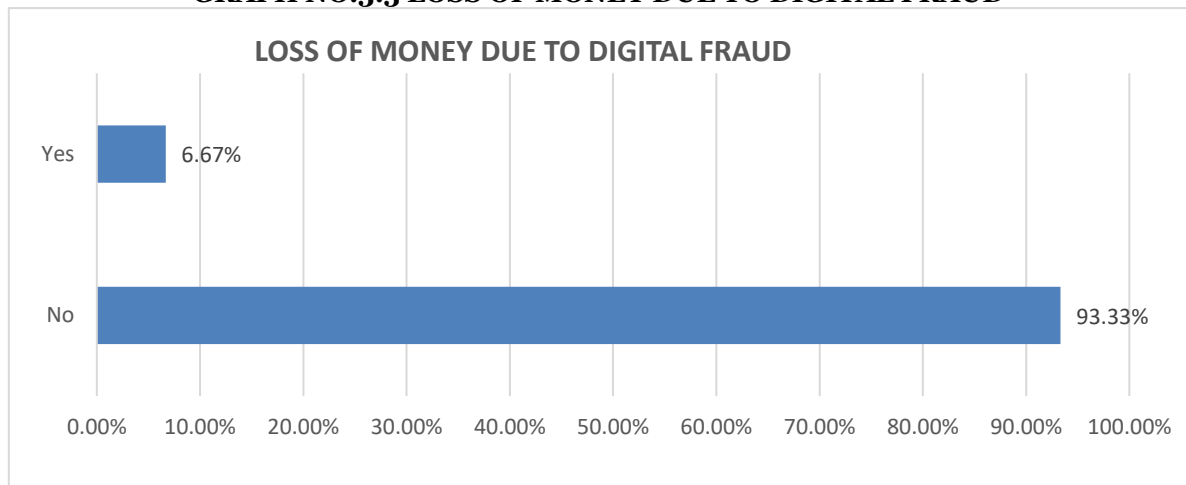
3.4 Concern about digital security

It is observed from the bar graph that of the 120 respondents, 60% are concerned a lot, 20% are somewhat concerned, 17.50% are little concerned and only 2.50% are not at all concerned. It can be concluded that majority of digital payment users are concerned about their digital security.

GRAPH NO. 3.4 CONCERN ABOUT DIGITAL SECURITY

CONCERN ABOUT DIGITAL SECURITY

Somewhat — 20.00%
Not at all — 2.50%
A lot — 60.00%
A little — 17.50%
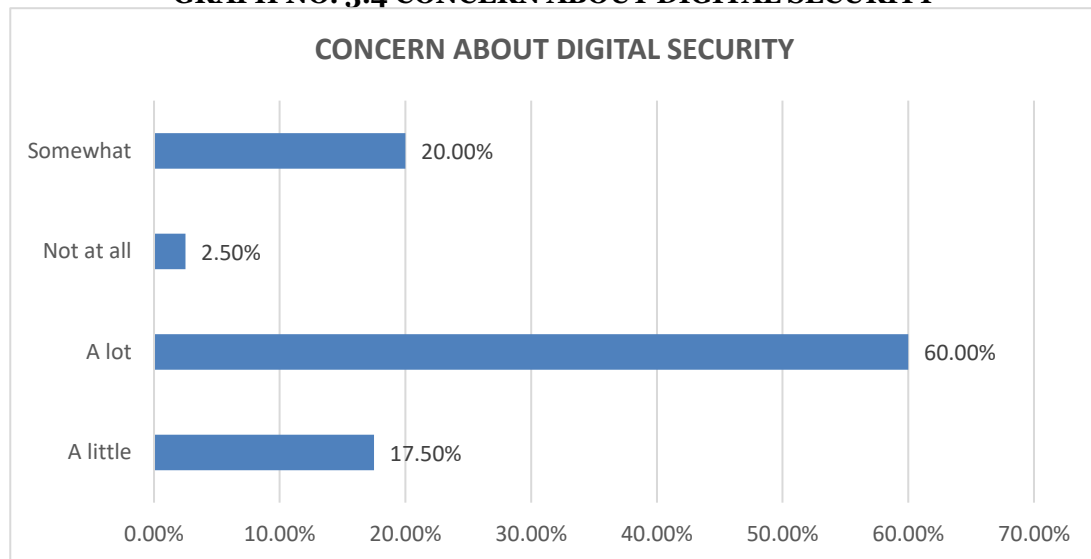
3.5 Reasons for concern about online mode as a method of payment

It is observed from the bar graph, of the 143 responses, 51.04% find it unsafe to use online mode of payment due to security concerns. 12.58% find it unsafe because of incorrect data. 15.38% find it unsafe because of the time involved. While 20.97% find it unsafe to use online mode of payment due to other reasons. It can be concluded that majority of the respondents find it unsafe to use online mode of payments due to security concerns.

GRAPH NO.3.5 REASONS FOR CONCERN ABOUT ONLINE MODE AS A METHOD OF PAYMENT
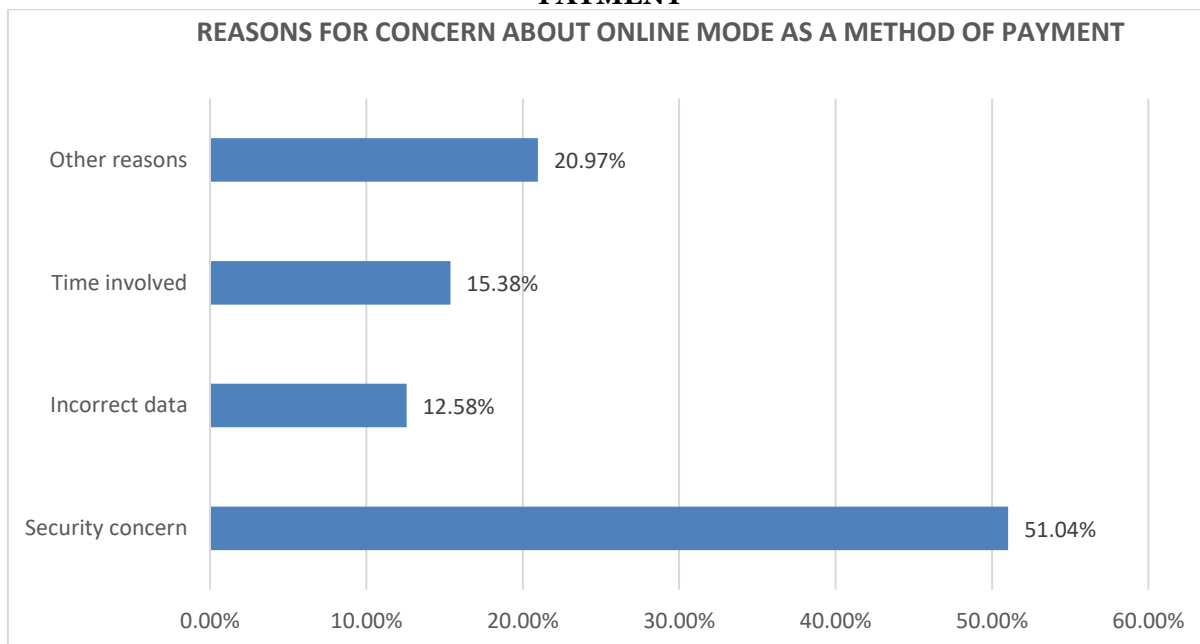
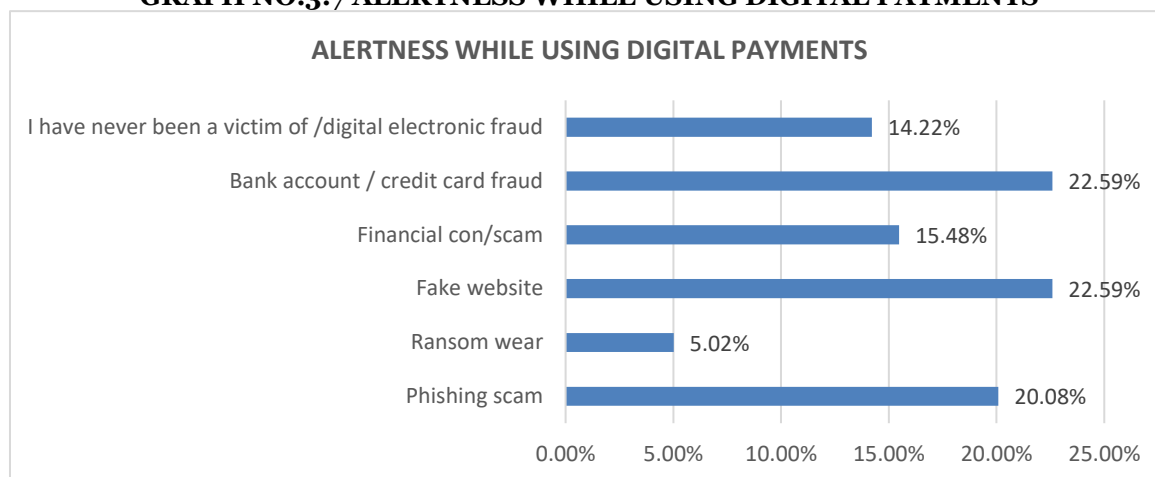### 3.6. Two factor authentications in digital payments

It is observed from the bar graph that of the 120 respondents, 80.83% prefer two factor authentications, 16.67% cannot say whether they prefer two factor authentication and only 2.50% say no to two factor authentications. It can be concluded that majority of digital payment users prefer two factor authentications while carrying out digital payments.

GRAPH NO.3.6 TWO FACTOR AUTHENTICATIONS IN DIGITAL PAYMENTS
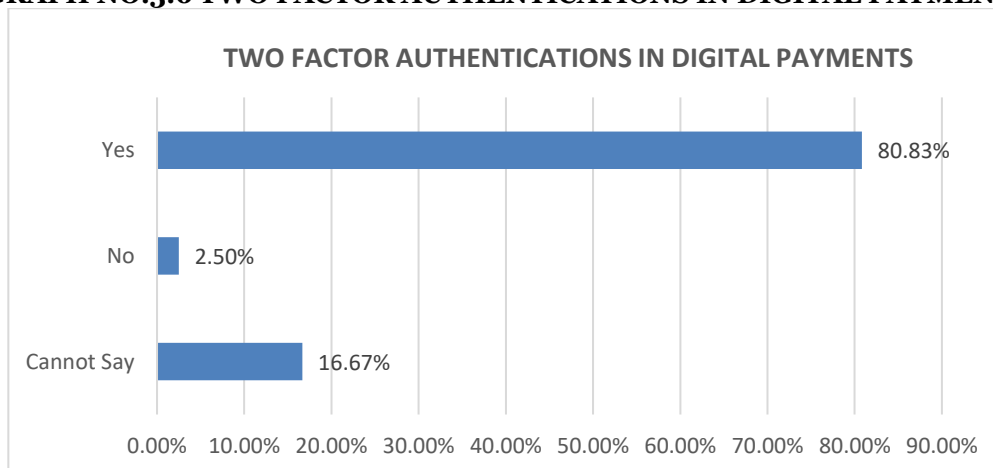
3.7 Alertness while using digital payments

It is observed from the bar graph, of the 120 responses, 20.08% believe phishing scam is a threat in cashless transactions. 5.02% say ransom wear is a threat in cashless transactions. 15.48% say financial scam is a threat in cashless transactions. While 22.59 say fake website and bank account/ credit card fraud are equal threats in cashless transactions. Whereas 14.22% haven't been a victim of digital/electronic fraud. It can be concluded that majority feel fake website and bank/ credit card fraud are the security threats in cashless transactions.

GRAPH NO.3.7 ALERTNESS WHILE USING DIGITAL PAYMENTS

ALERTNESS WHILE USING DIGITAL PAYMENTS

| Category	Percentage
I have never been a victim of /digital electronic fraud	14.22%
Bank account / credit card fraud	22.59%
Financial con/scam	15.48%
Fake website	22.59%
Ransom wear	5.02%
Phishing scam	20.08%

3.8 Security threats in cashless transaction

It is observed from the bar graph that of the 120 respondents, 86.67% believe that a digital customer has to always be alert to security issues when using digital payments. While 11.67% believe that digital customer has to be alert to security issues when using digital payment. Whereas 1.67% believe a digital customer should sometimes be alert when using digital payments. It can be concluded that majority of the respondents believe a digital customer should always be alert to security issues when using digital payments.

GRAPH NO.3.8 SECURITY THREATS IN CASHLESS TRANSACTION

SECURITY THREATS IN CASHLESS TRANSACTION

| Category	Percentage
sometimes	1.67%
Mostly	11.67%
Always	86.67%
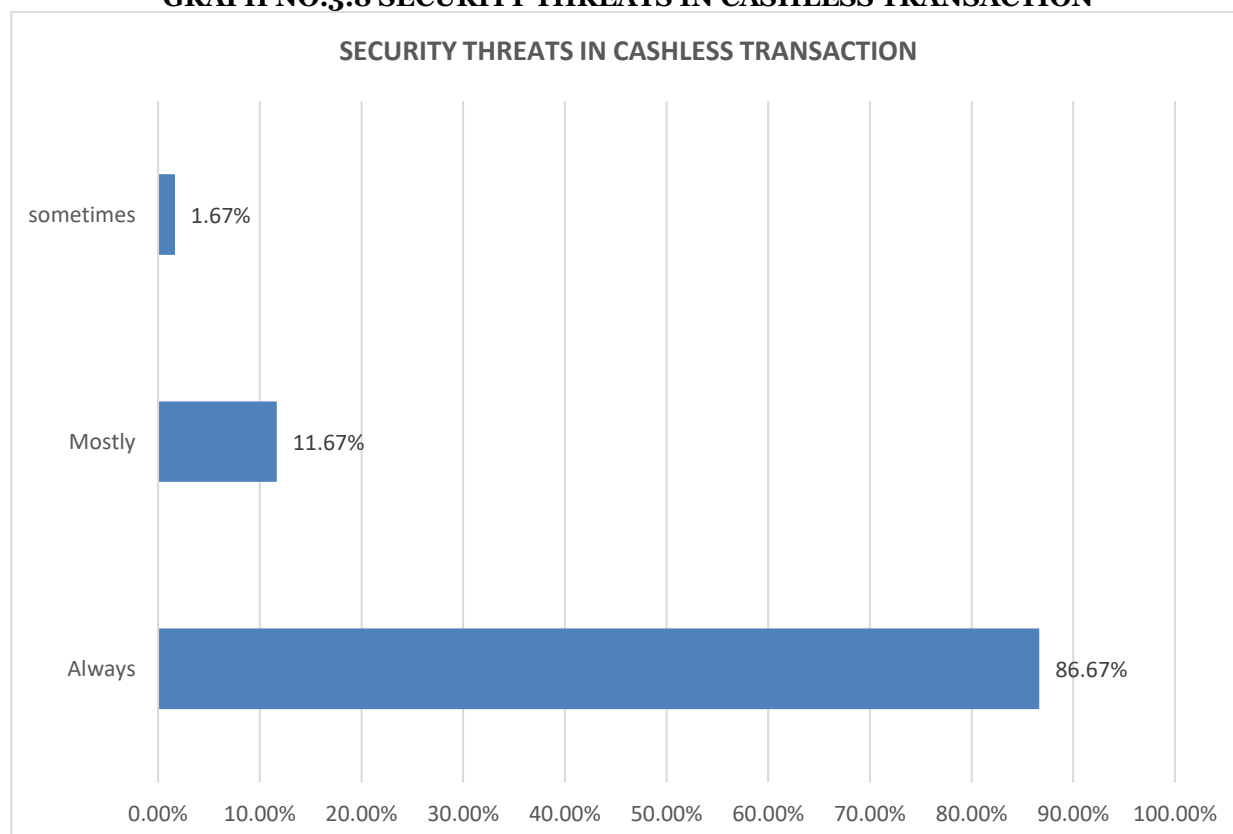
3.9 Use of Biometrics to make digital payments more secure

It is observed from the bar graph that of the 120 respondents, 64.17% feel biometrics would make digital payment a more secure choice for carrying out a transaction. While 27.50% cannot
say whether it will be secure or not with the use of biometrics. Whereas 8.33% feel use of biometrics won't make digital payment a more secure choice for carrying out a transaction. It can be concluded that majority of the respondents feel the use of biometrics will make digital payment a more secure choice for carrying out a transaction.

GRAPH NO .3.9 USE OF BIOMETRICS TO MAKE DIGITAL PAYMENTS MORE SECURE

USE OF BIOMETRICS TO MAKE DIGITAL PAYMENTS MORE SECURE

Yes — 64.17%
No — 8.33%
Cannot Say — 27.50%

0.00%   10.00%   20.00%   30.00%   40.00%   50.00%   60.00%   70.00%
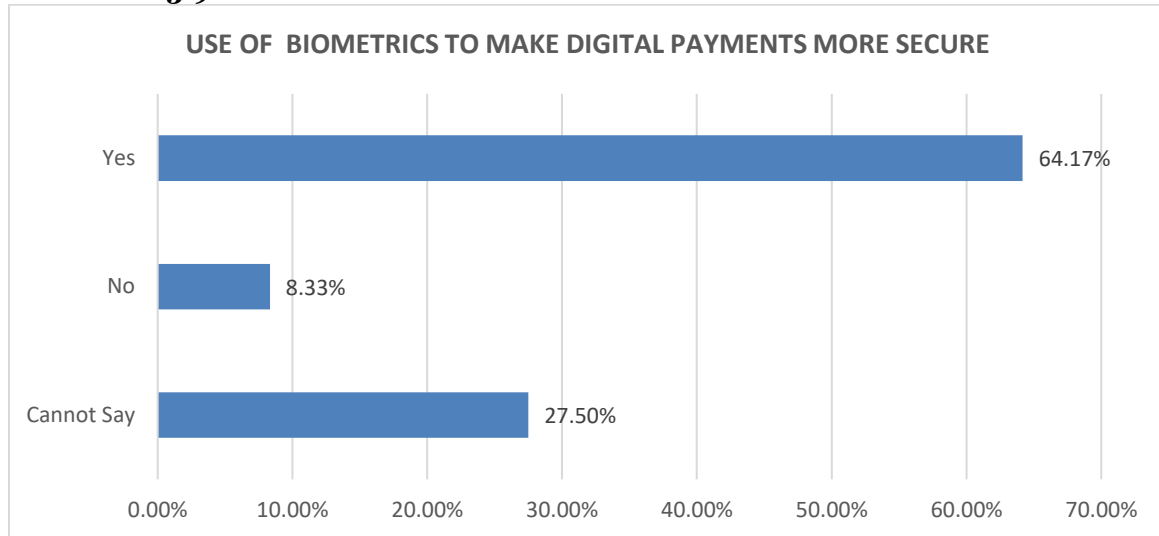
3.10 E-security measures to secure against digital frauds

It is observed from the bar graph, of the 120 responses, 34.49% say self-awareness in security is a measure that could secure against various kinds of online digital payment fraud. 13.17% say installing anti malicious software is another security measure. 21.70% say limiting online activities is a security measure. 9.30% say user education is a security measure against payment fraud. 21.31% say increasing/ updating online digital payment security is a security measure against payment fraud. It can be concluded that majority said self-awareness in security is a measure that can secure against various kinds of online digital payment fraud.

GRAPH NO.3.10 E-SECURITY MEASURES TO SECURE AGAINST DIGITAL FRAUDS

E-SECURITY MEASURES TO SECURE AGAINST DIGITAL FRAUDS

Increasing/ updating level of online digital payments security — 21.31%
User education — 9.30%
Limiting online activities — 21.70%
Installing anti malicious software — 13.17%
Self-awareness in security — 34.49%
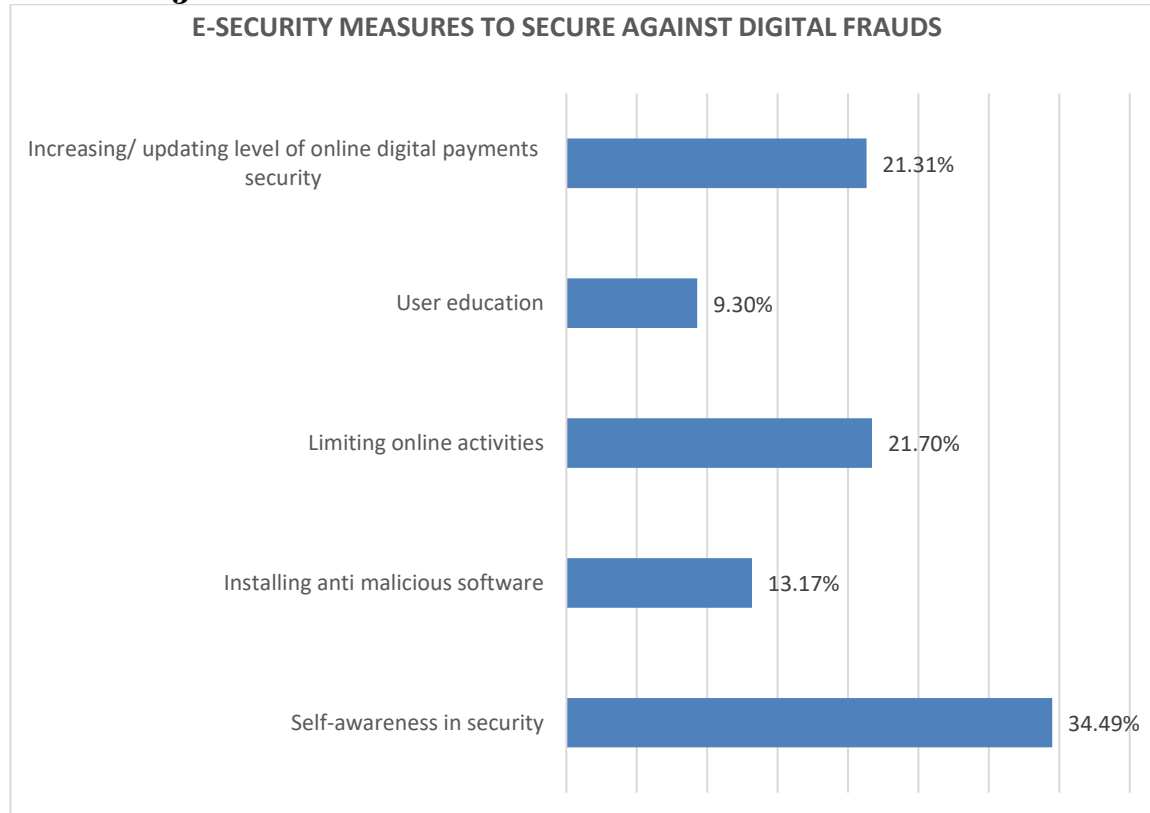
3.11 Use of digital payments if security wasn't an issue

It is observed from the bar graph that of the 120 respondents, 82.50% say they would be committed to only digital payments as a mode of carrying out transaction if security wasn't an issue. Whereas 17.50% say they wouldn't be committed to only digital payments as a mode of carrying out transaction even if security wasn't an issue. It can be concluded that majority of the respondents would use only digital payments as a mode of carrying out transaction if security wasn't an issue.

GRAPH NO.3.11 USE OF DIGITAL PAYMENTS IF SECURITY WASN'T AN ISSUE

USE OF DIGITAL PAYMENTS IF SECURITY WASN'T AN ISSUE

Yes — 82.50%

No — 17.50%

0.00% 10.00% 20.00% 30.00% 40.00% 50.00% 60.00% 70.00% 80.00% 90.00%
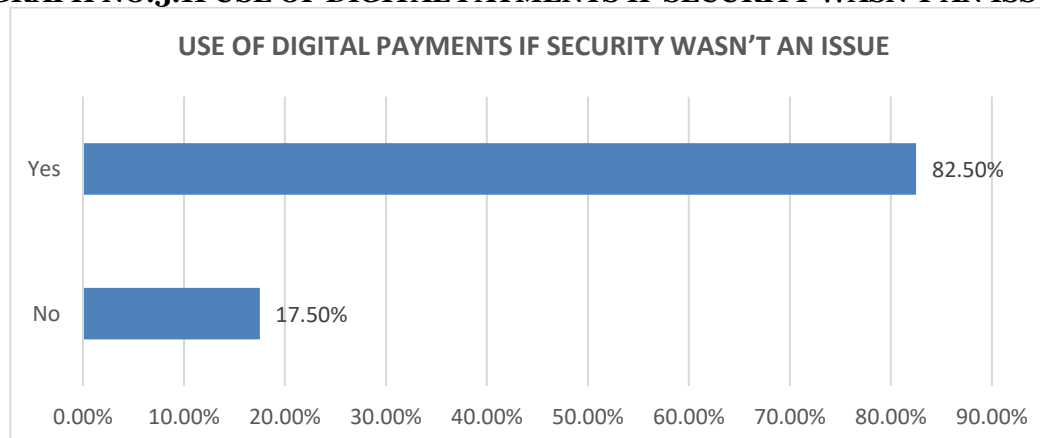
3.12 Medium of payment in the future

It is observed from the bar graph that of the 120 respondents, 52.50% feel both cash as well as cashless transactions will be in the near future. Whereas 44.17% feel it will be cashless transactions. While 3.33% feel it will be cash transactions. It can be concluded that a majority of the respondents feel it will be both cash as well as cashless transactions in the near future

GRAPH NO.3.12 MEDIUM OF PAYMENT IN THE FUTURE

MEDIUM OF PAYMENT IN THE FUTURE

Cashless — 44.17%

Cash — 3.33%

Both — 52.50%

0.00% 10.00% 20.00% 30.00% 40.00% 50.00% 60.00%
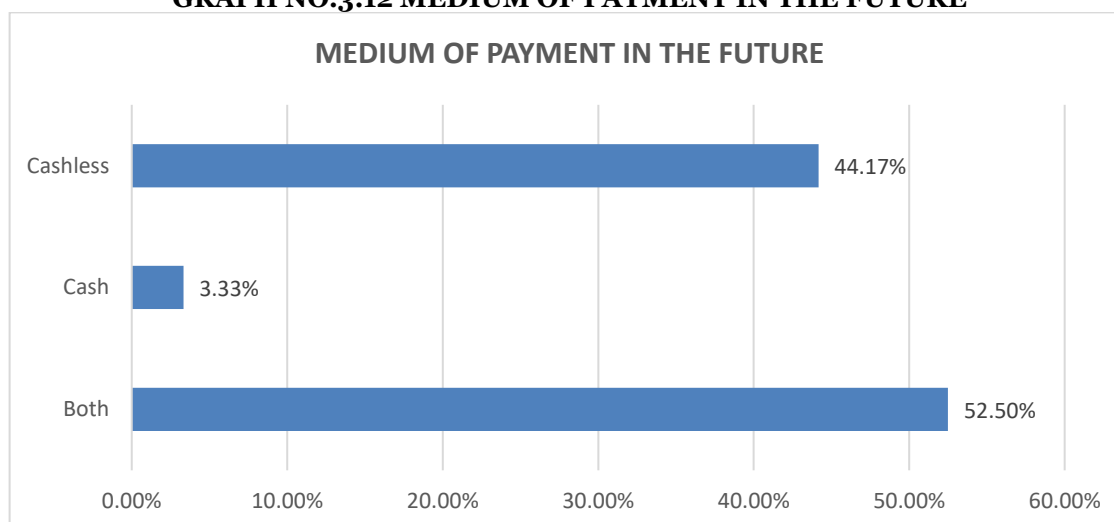
IV FINDINGS

i. Maximum respondent i.e., 62.50% stated that there is safety while using cashless transactions. (Chart no.3.1)

ii. Out of all the respondents, 39.17% stated they are comfortable in making large payments using digital payment. (Chart no.3.2)

iii. Majority of the people i.e., 93.33 % respondent opined there is no loss of money due to digital fraud. (Chart no.3.3)

iv. There is lot of concerns about digital security among majority of the respondents i.e., 60%. (Chart no.3.4)

v. 51.04% respondents stated Security concern is a major drawback about online modes as a method of payment. (Chart no.3.5)

vi. 80.83% respondent prefer two factor authentications in digital payments. (Chart no.3.6)

vii. Bank accounts/ Credit Card frauds and fake web sites are the major security threats in cashless transactions. (Chart no.3.7)

viii. Majority of the respondents i.e., 86.67% stated there is always alertness while using digital payments. (Chart no.3.8)

ix. 64.17% were of the opinion that biometrics would help to make digital payment more secure. (Chart no.3.9)

x. From the survey, it was observed that self-awareness is very important as a E- security measure to secure against digital frauds. (Chart no.3.10)

xi. Majority of the respondent stated that everything will be both cash and cashless in the near future. (Chart no.3.12)

V SUGGESTIONS

i.To ensure safe cashless transactions, the following suggestions are provided. All users who want to use apps for online transactions should download online payment apps only from official stores such as google play and apple store to ensure safety. Before one download any app, one should verify the publisher. More importantly, read the permissions that an app asks for.

ii.It is suggested never visit an online banking or shopping website by clicking a link received in an email or text message.

iii.All the people using online transactions should always choose a strong password for their net banking or online payment apps

iv.There should be two-factor authentication for your net banking or debit/card transactions which means whenever you make a payment, you will be asked to authenticate yourself twice. E.g., verification of OTP, passwords.

v.Avoid making digital payments from public computers to ensure safety. Also avoid using insecure wi-fi to do online transactions.

vi.Availability of basic infrastructural facilities like banking system, internet connections should be made available especially in rural area.

vii.Extra charges on any kind of digital transactions should be avoided.

viii.Provisions should be made available for people doing online transactions on a daily basis.

ix.There should be a regular check on the effectiveness and improvement required in digital payments

VI CONCLUSION

Humankind has evolved tremendously. It cannot be denied that there have been astounding changes in all facets of human life. One of them is the use of money in how we trade with each other. Cashless transaction and digital payment methods are accepted without the use of hard cash. The transactions are done via mobile banking, RUpay cards, UPI, USSD, virtual wallets, etc. The transaction shift in the economy from cash to cashless is on the grow as there are end to end encryptions thus resulting in the payments being secure and frauds are avoided. Primarily, cashless transactions are faster and much more convenient compared to cash transactions. Furthermore, a cashless society eliminates the need to carry cash and count

It out every time a transaction occurs. The issues related to achieving a proper cashless economy by providing financial education to the people along with better internet services. A cashless economy is definitely an integral part of our financial system now and is here to stay. The prevalence of smartphones and their computer-like capabilities have led to the creation of mobile wallets, which are digital versions of traditional wallets that someone would carry in their pocket.

The security of digital payments is a critical concern for users. With the rise of digital transactions and the increasing threats of cybercrime, it is essential to have robust security solutions in place. However, with so many options available, it can be difficulty to where to turn for reliable protection.

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