

**PSYCHOLOGICAL AND SOCIAL FACTORS THAT AFFECT
CALL CENTER SCAM VICTIMIZATION IN THAILAND**

The seal of Mahidol University is a circular emblem. It features a central blue field with a golden chakra (a five-spoked wheel) and a golden stupa (a tiered spire) rising from the center. The seal is surrounded by a golden border containing Thai script. The text 'PIMCHANOK TANOMJIT' is superimposed over the central blue field of the seal.

PIMCHANOK TANOMJIT

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CALL CENTER SCAM VICTIMIZATION IN THAILAND**

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PSYCHOLOGICAL AND SOCIAL FACTORS THAT AFFECT CALL CENTER SCAM VICTIMIZATION IN THAILAND

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ABSTRACT

This thematic paper investigates the psychological and social determinants of call center scam victimization in Thailand, where the rise of digital communication has led to increased exposure to fraudulent schemes. The research aims to identify influential factors, explore their interrelations, and suggest preventive measures.

A quantitative design was employed, collecting survey data from 400 individuals with firsthand scam experience. Multiple regression analysis assessed the effects of psychological variables—such as motivation, beliefs, attitudes, and self-concept—and social variables, including family influence, reference groups, and social roles.

Findings indicate that both psychological and social factors significantly contribute to victimization risk. Motivation, personal beliefs, and family influence were especially prominent. The tendency to rely on unverified information from familiar social sources was a recurring pattern among victims. The most common scam types reported were email fraud, identity theft, and deceptive phone calls.

KEY WORDS: CALL CENTER SCAM/ PSYCHOLOGICAL FACTORS/ SOCIAL FACTORS/ FRAUD VICTIMIZATION/ THAILAND

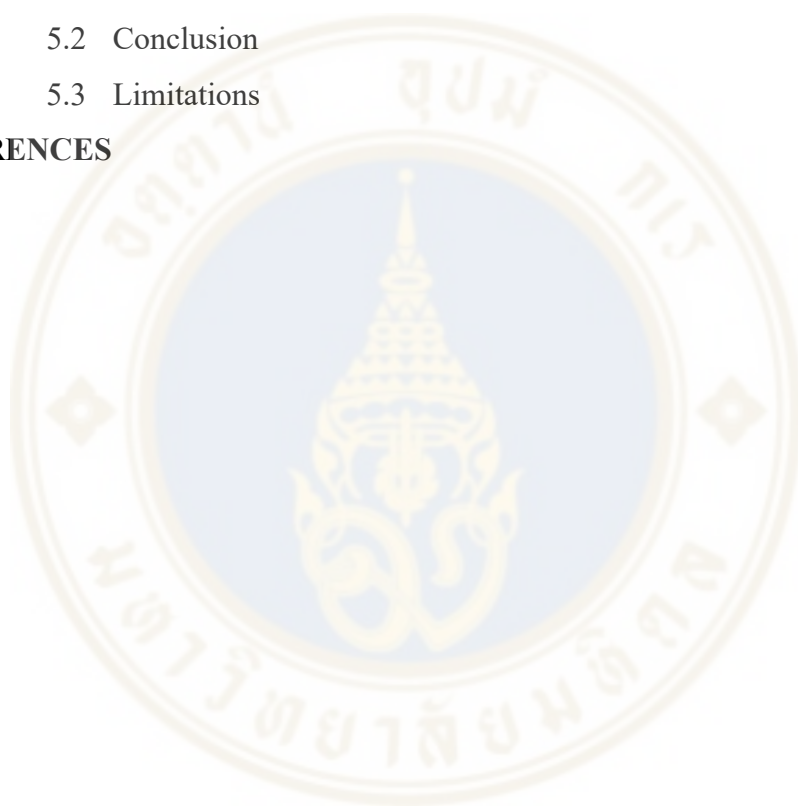
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CHAPTER I

INTRODUCTION

1.1 Background and problem statements

The use of technology and the internet for financial transactions and interpersonal communication has been continuously increasing. The use of technology in these transactions has made life more convenient. However, there are ill-intentioned people who use this technology to deceive others, which has become another major economic loss problem. From the report on statistics of online reports of technology crimes for the period of March 1, 2022 to March 18, 2023, it was found that overall, fraudulent activities have a wide impact on society and the economy. Fraud from buying and selling goods is the most common, accounting for one-third of all cases, causing financial damages in the billions of baht. Next in line is fraud from money transfers related to various activities, which, despite the smaller number of cases, causes a very large amount of damage. In addition, there are frauds in the form of loans where the borrower does not actually receive the money, fraud through fraudulent phone calls, or so-called call center cases, and investment fraud that is not directly fraudulent but has a broad impact on victims. All of these indicate a variety of forms of fraud, all of which severely impact people financially. Importantly, the category of "other cases", which covers fraud cases that are not categorized in a specific category, has the highest number of cases and damages overall, showing that fraud continues to occur in a complex and diverse form, which is difficult to manage and prevent. All of these impacts not only directly affect financial damages, but also undermine confidence in society and the economic system. Therefore, this damage needs to be seriously addressed and more effective preventive measures in the future (Royal Thai Police, 2023).

In the era of rapid development of communication technology, telephones and various communication devices have become an important part of the daily life of Thai people. However, such advancement has also brought about significant social problems such as telephone fraud or Call Center Scams, which are found to be a threat

that causes widespread economic and psychological damage to victims. According to statistical data published in the past few years, the number of victims of telephone fraud in Thailand has been continuously increasing, indicating the vulnerability of Thai people in terms of protecting themselves from such threats. This problem is not only caused by technological shortcomings, but also involves psychological and social factors that play an important role in causing individuals to fall victim.

Telephone scams are a worldwide problem that affects people's daily lives, especially in Thailand where mobile phones and other communication technologies are widely used. Telephone scams come in many forms, such as money scams, prize scams, or scams to steal consumers' personal information and assets. Despite efforts by governments and organizations to prevent this, many people still fall victim to these scams. Psychological and social factors have a significant impact on people falling victim to scams. Studying these factors can help understand why people fall victim, as well as ways to prevent and reduce such incidents in the future. (Boonmee, 2023). In particular, psychological factors related to trust, lack of information verification skills, and believing in seemingly reliable words. Social factors related to trust, such as lack of education or lack of information about scams in society, can also be reasons why people are not careful and become victims.

As can be seen, psychological factors such as excessive trust, anxiety in emergency situations, or lack of awareness and concentration when receiving pressuring information are all accelerators that cause individuals to make wrong decisions. At the same time, social factors such as a culture of respect for authority, fear of breaking the law, and lack of media literacy cause people in Thai society to tend to believe information received through deception. Studying these factors is therefore very important because it will help understand the root causes of the problem and develop targeted prevention methods, whether it be educating the public, developing public relations media that raises awareness, or designing proactive measures to prevent falling victim. Solving problems in terms of psychology and society will not only help reduce economic damage, but also help promote the quality of life and stability of Thai people in the long term.

Therefore, researchers are interested in studying Psychological and Social Factors that Affect Call Center Scam Victimization in Thailand to develop effective guidelines for preventing and solving telephone scams, which can lead to a society that

is more aware of and aware of such risks, as well as developing policies and plans to promote prevention and reduce the impact of scams in society.

1.2 Objectives

1. To study the psychological factors that affect Call Center Scam Victimization in Thailand
2. To study the social factors that affect Call Center Scam Victimization in Thailand
3. To analyze the relationship between psychological and social factors that affect Call Center Scam Victimization in Thailand
4. To suggest guidelines or measures to reduce Call Center Scam Victimization in Thailand

1.3 Potential Output

1. This study will help to improve understanding of psychological factors that influence victimization by telephone scams, such as over-trust, fear, or decision-making under pressure, which can be used to develop more effective preventive measures.
2. The results of the study on social factors, such as lack of knowledge about online threats, belief in unreliable sources of information, or lack of social support, will help identify weaknesses that need to be addressed in order to raise awareness in the community.
3. The link between psychological and social factors that influence victimization will provide a deeper understanding of behaviors and risk factors, which can be applied to design programs or campaigns that reduce risk.
4. This study will lead to clear and tangible recommendations or measures for relevant agencies, such as creating media to provide knowledge, developing comprehensive laws, or creating effective warning systems.

CHAPTER II

LITERATURE REVIEW

2.1 Cybercrime

Cybercrime is classified into four main types: cyber intrusion, cyber fraud and theft, cyber pornography, and cyber violence (Wall, 2001). The factors that make cyber fraud successful concluded that the factors that make online fraud successful are 1) the fraudster, 2) social media, 3) the fraud, and 4) the potential victim (Tsikerdekis & Zeadally, 2014). Whether or not cyber fraud will be successful depends on many factors. Fraudsters often use deceptive messages to deceive victims through channels, and social networks are one of the channels that make fraud very successful on a large scale because there are currently a large number of users on social networks. Fraudsters can use false information to make their fraud successful. As the United Nations Office on Drugs and Crime (UNODC) revealed in 2022, 1 in 4 internet users in the Asia Pacific region will fall victim to online scams. From general usage activities, the types of online scams are as follows: 1) Email scams 2) Phone scams 3) Financial scams 4) Identity scams 5) Romance scams 6) Clickbait scams 7) Text message scams (Thana Haphiphat, 2024).

Meanwhile, the Bank of Thailand has classified online fraud into various types (Bank of Thailand, 2022), including:

1. Phishing for email account passwords. Note that the scammers will claim to be email account providers, but the email address shown will not be the email account name of the actual email provider (read more about how to spot fake emails). In addition, the email messages sent to the second victim are often in unfamiliar English or Thai, such as using different pronouns than what was previously used in conversation.

2. Pretending to be different people and tricking the victim into transferring money or sending items to the victim. The scammers will pretend to be different people and trick the victim into transferring money or sending items to the victim. When the victim receives evidence of the transfer or sending of items from the scammers, they often

believe that the scammers have actually transferred the money or sent the items. After some time, the scammers will notify the victim, or there may be other scammers who pretend to be officers and tell the victim that they cannot transfer money or send items to the victim because they are stuck with various conditions. They will then charge the victim various fees.

3. Advertisements for informal loan sharks Scammers pretend to be loan providers and advertise on various websites or send emails directly to victims, claiming to provide low-interest informal loans with fast approval, no need to buy products, and no credit checks. When victims contact them and request a loan, the lender will claim that they will send a contract for the borrower to sign and ask the victim to transfer money to pay for the contract, documents, deposit, or interest within a specified time. They can cancel and request a refund of the advance transfer. Most victims are in a rush and are afraid that they will not get the loan, so they rush to transfer money to the lender within the specified time. However, when they contact the lender to request the loan, they cannot contact the lender again and lose their money without any chance of getting it back.

4. Pretending to be different people to trick victims into transferring money. Scammers may trick people into buying products or posting house rentals on various websites. When victims are interested, they will ask them to transfer the full amount via a money transfer service that does not require identification documents, naming the victim as the recipient, in order to trick victims into believing that it is only for confirmation of purchase of goods or services. However, when the victim transfers the money and provides a money transfer code, the scammer will use the code to immediately withdraw the money without any actual products for sale. In some cases, scammers may pretend to be a foreign company and contact victims who have posted job openings on the internet and say that they are hiring. But the victim must pay for a work permit abroad, even though the company does not actually exist.

5. Requesting a bank account number to store money. The scammer will advertise a job opening on the internet, deceiving the victim that it is a foreign company that sells a large number of products in Thailand. Therefore, the victim is asked to act as a money collector. They may pay a salary in proportion to the money received. When the money is transferred to the victim's account, the company will inform the victim to deduct the salary and immediately transfer the remaining money to the parent

company abroad via a money transfer service that does not require identification documents. The victim does not know that the money transferred to the victim's account is illegal money.

2.2 Psychological Factor

Psychological Factor refers to the factors of consumers' thought processes for deciding to buy products or services, which are influenced by psychological factors from within the individual. It consists of 7 topics:

1. Motivation is an internal mental state of the individual, which drives behavior to achieve goals (Solomon, 2002). Motivation occurs within the individual, but may be affected by external factors.

2. Perception is the process in which receive, organize or assign the meaning of stimuli using the five senses (Etzel, Walker & Stanton, 2001) or is the process in which individuals select, organize and interpret stimuli to create consistent meaning (Schiffman & Kanuk, 2000) or refers to the process of receptiveness of individuals towards the world they live in.

3. Learning refers to changes in consumer behavior resulting from learning and experience (Etzel et al., 2001), or refers to the process in which individuals apply their knowledge and experience to their purchasing decisions. And consumption behavior (Schiffman & Kanuk, 2000) or refers to changes in behavior or behavioral bias from past experiences. Learning occurs when a person receives a stimulus and will respond, which is the stimulus-response theory.

4. Beliefs refer to the idea that a person holds about something (Kotler, 2003, p. 198) or is an idea that a person holds in his mind about something that is a result of past experiences. And affects consumer purchasing decisions

5. Attitudes refer to a person's evaluation of satisfaction or dissatisfaction, emotional feelings, and behavioral tendencies that affect thoughts or things (Kotler, 2003, p. 199)

6. Personality and Freud's Theory of Motivation Personality refers to the different psychological characteristics of individuals. Which leads to a response to the environment that tends to be stable and consistent (Blackwell, Miniard & Engel, 2001)

7. Self-Concept is a feeling of a person that is impressive to the person. This will determine the characteristics of that person (Blackwell et al., 2001). Each individual will have their own personality or self-concept which will influence their purchasing behavior.

2.3 Social Factors

Walters (1978) explained that social characteristics are factors related to daily life and influence purchasing behavior. Social characteristics include reference groups, family, social roles, and buyer status, as detailed below:

1. Reference Groups refer to people who influence a person's attitude or behavior, which can be divided into 2 types: Direct or Membership Groups refer to groups of people who directly influence consumers and have face-to-face contact; Indirect Reference Groups refer to groups of people who indirectly influence consumers who do not know each other personally.

2. Family refers to the most important social organization, with family members being the primary direct reference group that greatly influences consumers' purchasing decisions.

3. Social of Role refers to the duties or behaviors that consumers adhere to according to their status. Social roles and status determine social actions among members to proceed smoothly and in harmony, leading to exchange and mutual benefits. In addition, life in society has the opportunity for conflicting roles to occur.

4. Status refers to something that indicates the consumer's social position in order to be accepted as the social status of that consumer. The actions of consumers in society are in accordance with their status.

2.4 Related research

Samart (2022) studied the pattern of falling victim to cyber fraud and found that 1) There are 8 factors affecting falling victim: economy, greed, technology, credibility of the deceiver, investment knowledge, living conditions, persuasion from relatives or acquaintances to invest, and self-confidence. 2) Those who fall victim to

call center scams have a pattern of deception to create fear or greed and have a limited time to decide. There are 4 factors affecting falling victim: fear, greed, unfamiliarity with technology, and being alone during the incident. 3) Those who fall victim to online shopping The deceiver will create a profile that looks credible, open a shop to sell on social media and sell through online marketplaces to build credibility. Fraudulent products are usually not very expensive or are cheaper than the general market. In addition, the group that falls victim to online love scams has a pattern of using psychology to deceive, creating good relationships and taking time to build trust. The victim is selected by looking at profiles on social media. There are 4 factors affecting falling victim: love, infatuation The credibility, loneliness and embarrassment of the deceived by all four forms of deception have a common factor: lack of awareness of deception.

Wittayatong (2021) conducted a study on the risk of becoming a victim of online transaction crime among Srinakharinwirot University students. The objectives were to study the level of risk of becoming a victim of online transaction crime, to study the relationship between personal factors and exposure to cybercrime information with risky behaviors of becoming a victim of online transaction crime, and to find ways to protect oneself from becoming a victim of financial transaction crime. The sample group was Srinakharinwirot University students, with data collected using an online questionnaire of 400 people, and data were collected by in-depth interviews with 10 people. The statistics used for quantitative data analysis were percentage, mean, standard deviation, t-test, F-test, and Pearson's correlation coefficient at a statistical significance level of 0.05. The results of the research found that the student respondents had a low risk of becoming a victim of online transaction crime. The results of the research hypothesis testing in terms of personal factors, it was found that the age and academic year of students with different levels of risk behaviors in becoming victims of online transaction crimes were significantly different at the 0.05 level. In addition, factors in receiving information about cybercrime in all aspects, including the perception of information value, knowledge of security, and perception of threats, were significantly related to risk behaviors in becoming victims of online transaction crimes. There are important recommendations for disseminating knowledge about the risks of becoming victims and self-protection by paying attention to and following information about computer security, especially for those under 18 years of age.

Aunpattanasin (2024) conducted a study on the prevention of risky behaviors of being deceived in online financial transactions among the elderly in Suphan Buri Province. He stated that the advancement of science and technology is like a double-edged sword. It has both great benefits and dangers if used incorrectly or unknowingly, especially the use of telephone communication technology to deceive online financial transactions by fraudsters. The research results found that 1) risky behaviors of being deceived in online financial transactions have the most direct relationship with risk perception, followed by intention to use social media continuously, components that cause errors, and perception of ability to handle threats. 2) The prevention of risky behaviors of being deceived in online financial transactions among the elderly in Suphan Buri Province include always following up on safety news and knowledge, providing knowledge of the law on online financial transactions to the elderly in the family as a basic method of protection for the elderly in the family who have to make online financial transactions, limiting the transaction amount, adjusting the amount for paying for goods or transferring money to be appropriate for online financial transactions, and not disclosing personal information including financial information.

2.5 Conceptual framework in research

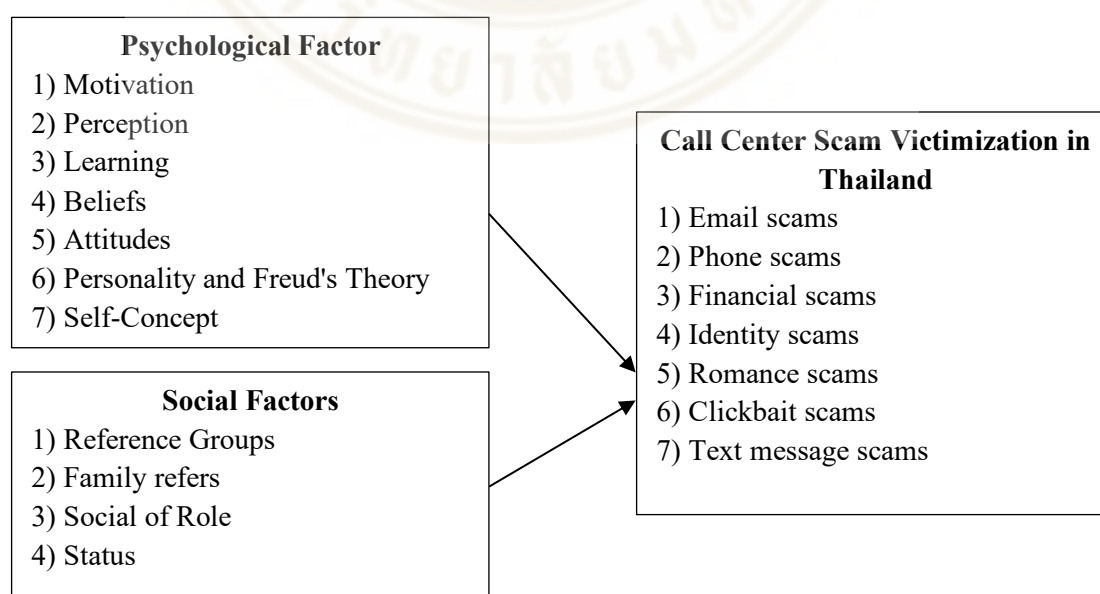


Figure 2.1 Conceptual framework

CHAPTER III

METHODOLOGY

This research is a quantitative research. The survey method was used to collect data from the sample group and analyze the relationship between psychological and social factors and victimization by telephone fraud.

3.1 Population and sample

The population used in this research is people who have experience of being victims of telephone fraud in Thailand, which is an unknown number.

Sample people who have experience of being victims of telephone fraud in Thailand Because the researcher does not know the exact population, the calculation method was used from the formula of W.C. Cochran (Chutinan Chiewphanit, 2020).

$$n = \frac{Z^2 pq}{e^2}$$

- n means the number of samples
- p means the percentage value that is desired to be randomly selected from the entire population equal to 0.5
- q means 1-p
- e means the percentage of sampling error that is allowed to occur equal to 0.05
- z means the standard normal value obtained from the standard normal distribution table is 1.96

For this research, the researcher set the percentage value to be randomly selected from the entire population equal to 50% or 0.5. The standard normal value

obtained from the standard normal distribution table was equal to 1.96 and a 95% confidence level was required, which means that the value of the machine was allowed to be 5%. Therefore, the values can be substituted as follows:

$$\begin{aligned} n &= \frac{(1.96)^2 (0.5)(1-0.5)}{(0.05)^2} \\ &= 384 \end{aligned}$$

From the calculation of the sample size, it is equivalent to 384 people. In order to prevent errors from incorrect and incomplete questionnaires and to obtain the most accurate results in data analysis, the researcher determined the sample group in this study in addition to the calculated sample size of 400 people. The researcher used the convenience sampling method. Purposive sampling was used.

3.2 Instruments used for data collection

Instruments used in the study The researcher determined the topics that he wanted to study and collected a questionnaire as a tool for data collection. The researcher studied from concepts, theories, and related research and created appropriate questions that were consistent with the objectives. It is divided into 5 parts as follows:

Part 1 Personal information is a checklist questionnaire. Questions on gender, age, education level, occupation, and income

Part 2 Psychological factors using the Likert Scale method, which is a rating scale (Likert, 1932) consisting of 5 levels: most, much, moderate, little, and least

Part 3 Social factors using the Likert Scale method, which is a rating scale (Likert, 1932) consisting of 5 levels: most, much, moderate, little, and least

Part 4 Opinions about Call Center Scam Victimization in Thailand using the Likert Scale method, which is a rating scale (Likert, 1932) consisting of 5 levels: most, much, moderate, little, and least

Part 5 Questionnaire on other opinions and suggestions

This research uses the criteria of importance or success divided into 5 levels according to the Class Interval model. The analysis of data in each issue of the variable requires calculating the range value to be used as a criterion for comparison, which is considered the average score level to be used in the analysis. The calculated range value is added to each level of importance and used as the average score level for comparative analysis. The formula for calculating the range value is:

$$\begin{aligned}\text{Range} &= \frac{\text{Highest score} - \text{Lowest score}}{\text{Number of grade levels}} \\ &= \frac{5 - 1}{5} \\ &= 0.8\end{aligned}$$

Therefore, from the above criteria, it is possible to divide the average score for use in comparative analysis (Kanlaya Wanichbancha, 2017) as follows:

Average score 4.21 - 5.00 means the highest level of opinion

Average score 3.41 - 4.20 means the highest level of opinion

Average score 2.61 - 3.40 means the middle level of opinion

Average score 1.81 - 2.60 means the lowest level of opinion

Average score 1.00 - 1.80 means the lowest level of opinion

The researcher has checked the quality of the instrument by the following steps:

1. Check by sending the completed questionnaire to the advisor for consideration and checking for accuracy to create understanding for the respondents and to be appropriate for the research objectives.

2. Check the validity of the questionnaire (IOC) which has the following steps:

- Experts check the questions created by the researcher against the conceptual framework, consisting of 3 experts.
- Three experts check the quality of the instrument in terms of content and language style against the measurement objectives by using the following criteria for checking the questions:

Give a score of +1 if you are sure that the questions measure according to the objectives.

Give a score of 0 if you are not sure that the questions measure according to the objectives.

Give a score of -1 if you are sure that the questions do not measure according to the objectives.

The criteria for selecting questions are based on the IOC value. If it is greater than or equal to 0.5, it means that the questions measure according to the objectives, which are valid questions. If it is less than 0.5, it means that the questions do not measure according to the objectives and should be considered for improvement or elimination.

After checking the index of consistency (IOC) of the questions, it was adjusted according to the suggestions of the experts. By improving the content of each question to be appropriate for the research objectives. The results of the quality check of the content validity and language expressions from 3 experts showed that the IOC calculation results were in the range of X.XX- X.XX. The questionnaire was tested for validity and reliability by testing 30 sets of questionnaires. The Cronbach's Alpha value was found at 0.7, which is acceptable (Kalaya Wanichbancha, 2017). The questionnaires that were studied for validity and reliability were revised to obtain a complete tool for further data collection.

3.3 Data collection

This research is a quantitative research by survey research. Data collection is an important step in the statistical process to obtain data that meets the objectives and is consistent with the conceptual framework for further analysis. The researcher used the data collection method as follows:

1. The researcher prepared a questionnaire to collect data from a sample of 400 sets using Google Form.
2. The researcher introduced himself to ask for permission to collect the questionnaire by explaining about the research questionnaire responses to create understanding and for this research to be in accordance with the research objectives.

3. The researcher checked the accuracy and proceeded to collect data and checked the obtained questionnaires for data accuracy.

4. Data collection for this research The researcher collected data from the developed questionnaire as mentioned above to ask for a place to store it. The respondents answered the questionnaires via Google Form and the researcher explained the questionnaires to the respondents before proceeding. When the respondents agreed, the next step was to proceed. which will take 1 month to collect data.

5. Take the returned questionnaires to check the completeness of the answers, 400 sets, and assign scores to each question to analyze statistically using a ready-made statistical computer program.

3.4 Data analysis and statistics used

The research instruments were questionnaires distributed online. The data obtained from the questionnaires were analyzed using descriptive statistics, including Frequency, Percentage, Mean, and Standard Deviation. Inferential statistics included analyzing the relationship between psychological and social factors and victimization by telephone fraud using Multiple Regression Analysis.

CHAPTER IV

FINDINGS

4.1 Respondent information

Table 4.1 Number and percentage of Respondent information

	Respondent information	Number	Percentage
Gender	Male	192	48.0
	Female	208	52.0
Age	Less than 30 years	58	14.5
	31-40 years	68	17.0
	41-50 years	103	25.8
	51-60 years	97	24.3
	More than 60 years	74	18.5
Education level	Primary education	91	22.8
	Lower secondary school	100	25.0
	High school	81	20.3
	Diploma	66	16.5
	Bachelor's degree	45	11.3
	Master's degree	10	2.5
	Higher than master's degree	7	1.8
Occupation	Civil servants, state enterprise employees	44	11.0
	Business owner	66	16.5
	Student	74	18.5
	Employment careers	104	26.0
	Farmer	44	11.0
	Company employees	68	17.0
Income	Less than 15,001 Baht	87	21.8
	15,001- 30,000 Baht	83	20.8
	30,001-45,000 Baht	90	22.5
	45,001-60,000 Baht	75	18.8
	More than 60,000 Baht	65	16.3

Gender It was found that most of the respondents were Female, 208 people, or 52.0 percent, aged 41-50 years, 103 people, or 25.75 percent, most of them graduated from Lower secondary school, 100 people, or 25.0 percent, most of them had Employment careers, 104 people, or 26.0 percent, most of them had incomes of 30,001-45,000 Baht, 90 people, or 22.5 percent.

4.2 The psychological factors that affect Call Center Scam Victimization in Thailand

Table 4.2 Mean and standard deviation of Psychological factors

Psychological factors	\bar{x}	S.D.	Results
1. Motivation	3.22	0.70	Moderate
2. Beliefs	3.19	0.69	Moderate
3. Self-Concept	3.18	0.74	Moderate
4. Personality and Freud's Theory	3.13	0.71	Moderate
5. Attitude	3.12	0.72	Moderate
6. Perception	3.09	0.68	Moderate
7. Learning	3.08	0.75	Moderate
Total	3.14	0.71	Moderate

From Table 4.2, the mean and standard deviation of Psychological factors were at a moderate level (mean = 3.14). The aspect with the highest mean was Motivation (mean = 3.22), followed by Beliefs (mean = 3.19), Self-Concept (mean = 3.18), Personality and Freud's Theory (mean = 3.13), Attitude (mean = 3.12), Perception (mean = 3.09), and Learning (mean = 3.14), respectively. Each aspect can be considered as follows:

Motivation was at a moderate level (mean = 3.22). The highest mean was I tend to trust advice from people in the same group as me, such as coworkers or online groups. (mean = 3.28). Next were I tend to get information about financial services or online transactions from friends or social groups that I trust (mean = 3.26) and I feel pressured to make financial decisions if my social group shares the same opinions. (mean = 3.11), respectively.

Perception was at a moderate level (mean = 3.09). The highest mean was I can quickly tell whether a text or phone call I receive is a scam. (mean = 3.21). Next were I often judge a caller's credibility by the name of the company or organization they refer to. (mean = 3.16) and I tend to trust information I receive from someone who has a confident, official tone. (mean = 2.09), respectively.

Learning was at a moderate level (mean = 3.08). The highest mean was I learn from past experiences and can be more aware of scams. (Mean = 3.16), followed by I have been scammed before but still feel that it is difficult for me to prevent such incidents. (Mean = 3.07) and I keep up with news about phone scams and apply them in real life. (Mean = 3.02), respectively.

Beliefs were at a moderate level (Mean = 3.19). The highest mean was I believe that government agencies or large companies will never call me to ask for personal information (Mean = 3.27), followed by I believe that call center scams happen to other people, but not to me. (Mean = 3.22) and I believe that if a phone number clearly shows that it is an official number, it means that it is a reliable contact. (Mean = 3.09), respectively.

Attitude was at a moderate level (Mean = 3.12). The highest mean was I believe that I can always control the situation and prevent being scammed. (Mean = 3.21), followed by I feel uncomfortable refusing a request from someone who appears to be an official. (Mean = 3.12) and I find it normal to give out personal information over the phone if the contact is friendly. (Mean = 3.04), respectively.

Personality and Freud's Theory were at a moderate level (Mean = 3.13). The aspect with the highest mean was I use reason and analyze information before making decisions to transact over the phone (Ego) (Mean = 3.20), followed by I tend to follow rules and listen to orders from those who seem more powerful (Superego) (Mean = 3.12) and I tend to make decisions based on emotion and feelings rather than reason (Id) (Mean = 3.06), respectively.

Self-Concept was at a moderate level (Mean = 3.18). The aspect with the highest mean was I believe that falling victim to a scam reflects a person's vulnerability. (Mean = 3.22), followed by I consider myself to be a cautious and careful person in making financial decisions (Mean = 3.19) and I feel I have the ability to distinguish between a genuine offer and a scam. (Mean = 3.13), respectively.

4.3 The social factors that affect Call Center Scam Victimization in Thailand

Table 4.3 Mean and standard deviation of Social factors

Social factors	\bar{x}	S.D.	Results
1. Family Refers	3.23	0.70	Moderate
2. Reference Groups	3.22	0.69	Moderate
3. Social Role	3.15	0.73	Moderate
4. Social Status	3.13	0.74	Moderate
Total	3.18	0.72	Moderate

From Table 4.3, the mean and standard deviation of Social factors were at a moderate level (mean = 3.18). The aspect with the highest mean was Family Refers (mean = 3.23), followed by Reference Groups (mean = 3.22), Social Role (mean = 3.15), and Social Status (mean = 3.13), respectively. The aspects can be considered as follows:

Reference Groups were at a moderate level (mean = 3.22). The aspect with the highest mean was I tend to trust advice from people in the same group as me, such as coworkers or online groups. (mean = 3.31), followed by I feel pressured to make financial decisions if my social group shares the same opinions. (mean = 3.24), and I tend to get information about financial services or online transactions from friends or social groups that I trust. (mean = 3.12), respectively.

Family Refers were at a moderate level (mean = 3.23). The aspect with the highest mean was I believe that information received from family members is more reliable than information from others. sources. (Mean = 3.28) followed by I have been contacted by a scammer claiming to be a family member who needs financial assistance. (Mean = 3.23) and I often seek advice from my family before making a decision to make a transaction over the phone or online. (Mean = 3.18), respectively. Social Role was at a moderate level (Mean = 3.15). The aspect with the highest mean was I feel that my social role makes me more responsible for my financial transactions. (Mean = 3.19), followed by I often make decisions based on the social role of the caller, such as claiming to be a police officer or a bank officer. (Mean = 3.15) and I tend to trust people

who pretend to be government officials or high-ranking individuals. (Mean = 3.11), respectively.

Social Status was at a moderate level (Mean = 3.13). The highest mean value was I pay attention to my own image and social status when making a financial transaction. (Mean = 3.16), followed by I feel that receiving special offers from banks or large companies is appropriate for my status. (Mean = 3.13) and I often believe offers that seem to be privileges for people with high social status. (Mean = 3.11), respectively.

4.4 Call Center Scam Victimization in Thailand

Table 4.4 Opinions about Call Center Scam Victimization in Thailand

Opinions about Call Center Scam Victimization in Thailand	\bar{x}	S.D.	Results
1. Email Scams	3.16	0.73	Moderate
2. Identity Scams	3.14	0.73	Moderate
3. Financial Scams	3.12	0.72	Moderate
4. Phone Scams	3.12	0.73	Moderate
5. Romance Scams	3.11	0.71	Moderate
6. Text Message Scams	3.11	0.72	Moderate
7. Clickbait Scams	3.10	0.71	Moderate
Total	3.12	0.72	Moderate

From Table 4.4, the mean and standard deviation of Opinions about Call Center Scam Victimization in Thailand were at a moderate level (mean = 3.12). The aspect with the highest mean was Email Scams (mean = 3.16), followed by Identity Scams (mean = 3.14), Phone Scams, Financial Scams (mean = 3.12), Romance Scams, Text Message Scams (mean = 3.11), and Clickbait Scams (mean = 3.10), respectively. The aspects can be considered as follows:

Email Scams were at a moderate level (mean = 3.16). The aspect with the highest mean was I have received emails from people claiming to be bank or government officials asking for personal information. (mean = 3.19), followed by I have been asked

to transfer money or provide credit card information via emails that look legitimate. (mean = 3.18) and I have clicked on links in emails claiming to be special promotions or emergency alerts from well-known. companies. (Mean = 3.10) respectively.

Phone Scams were at a moderate level (Mean = 3.12). The highest mean was I have been rushed to make financial transactions over the phone without giving myself time to think or consider. (Mean = 3.23). Next were I have received calls claiming to have won special prizes and have to pay an advance fee. (Mean = 3.08) and I have received calls from people claiming to be police officers or government agencies threatening me to transfer money. (Mean = 3.06) respectively.

Financial Scams were at a moderate level (Mean = 3.12). The highest mean was I have received attractive loan offers. But was charged a fee without actually lending. (Mean = 3.16). Next were I have been tricked into investing in a scheme that promises unreasonably high returns. (Mean = 3.14) and I have been persuaded to transfer money to an unknown person's account with the promise of returns. (Mean = 3.07) respectively.

Identity Scams were at a moderate level (mean = 3.14). The highest mean was I have found that my personal information was used in transactions that I did not authorize. (mean = 3.20), followed by I have received notifications about new bank accounts or credit cards that I did not apply for. (mean = 3.12) and I have been asked to provide my ID card information or OTP code via phone or email. (mean = 3.10), respectively.

Romance Scams were at a moderate level (mean = 3.11). The highest mean was Romance Scams (mean = 3.14), followed by I have been asked to transfer money to someone I know online but have never met in person. (mean = 3.12) and I have had an experience talking to someone claiming to be a foreigner who needs financial assistance. (mean = 3.07), respectively.

Clickbait Scams were at a moderate level (mean = 3.10). The highest mean score was I have been tricked into downloading applications that caused my personal information or bank account to be stolen. (Mean = 3.14), followed by I have clicked on fake advertising links or news that claimed to have promotions or freebies. (Mean = 3.11) and I have received notifications that I won prizes from platforms that I have never used before. (Mean = 3.05), respectively.

Text Message Scams were at a moderate level (Mean = 3.11). The highest mean score was I have received fake notifications about payments, parcel deliveries or suspended accounts, and a link to click. (Mean = 3.13), followed by I have been tricked into signing up for paid services by mistake via a link or OTP received via text message. (Mean = 3.12) and I have received SMS or in-app messages claiming to be from a bank or financial institution asking me to provide personal information. (Mean = 3.07), respectively.

4.5 The relationship between psychological and social factors that affect Call Center Scam Victimization in Thailand

In order to test the relationship between independent variables according to the conceptual framework, the researcher has examined the tolerance value of Variance Inflation Factor (VIF) according to the analysis conditions in this work using Multiple Regression with details as follows:

Table 4.5 Examination of Tolerance value and finding the VIF value

Independent variable	Collinearity Statistics	
	Tolerance	VIF
The psychological factors	0.951	1.051
The social factors	0.987	1.114

From Table 4.5, it was found that the two independent variables, the psychological factors and the social factors, had the lowest Tolerance value of 0.951, which was higher than the minimum criterion of 0.1, and the highest VIF value was 1.114, which was less than 10 according to the criterion. Therefore, it can be concluded that the two independent variables were not related and were appropriate to analyze to test the research hypothesis further.

The results of the multiple regression analysis for The relationship between psychological and social factors that affect Call Center Scam Victimization in Thailand are as follows:

Table 4.6 Multiple regression analysis testing the relationship between psychological and social factors that affect Call Center Scam Victimization in Thailand

(n = 400)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.813	.174		10.425	0.000**
The psychological factors (X ₁)	.232	.048	.235	4.874	0.000**
The social factors (X ₂)	.184	.040	.219	4.546	0.000**
R² = 0.125; Adj. R² = 0.121; SE(est) = 0.14501; F = 28.462; Sig. = 0.000**					

Note ** Statistically significant at the 0.01 level.

The analysis results of the relationship between psychological and social factors that affect Call Center Scam Victimization in Thailand using statistical methods in the form of linear multiple regression analysis, the analysis results are as follows:

$$Y = 1.813 + 0.232(X_1) + 0.184(X_2) + 0.174$$

From Table 4.6, the two factors can jointly explain Call Center Scam Victimization in Thailand by 12.10 percent (Adj. R² = 0.121). The factors that have a statistically significant effect on Call Center Scam Victimization in Thailand are as follows: The psychological factors (Beta = 0.232, Sig. = 0.000**) and the social factors (Beta = 0.184, Sig. = 0.008**) have a statistically significant effect at the .01 level, with an F value of 28.462 indicating that the model is appropriate and can explain the variance of the dependent variable to some extent. When considering the t-statistic, it was found that

The psychological factors (X₁) had a statistically significant positive effect on Call Center Scam Victimization in Thailand at a 99 percent confidence level, meaning that a 1-unit increase in the psychological factors would result in a 0.232-unit increase in Call Center Scam Victimization in Thailand.

The social factors (X₂) had a statistically significant positive effect on Call Center Scam Victimization in Thailand at a 99 percent confidence level, meaning that a 1-unit increase in the psychological factors would result in a 0.232-unit increase in Call Center Scam Victimization in Thailand.

CHAPTER V

RECOMMENDATION AND CONCLUSION

5.1 Recommendation n

1. The government should integrate cooperation with the media, NGOs, and the private sector to create easy-to-understand and concise public relations media, such as short videos, infographics, and educational articles on “Being Aware of Scams and Fighting Online Threats”, a 1-2 minute short video about online scams such as phishing, call center gangs, investment scams, and pyramid schemes, presented on major social media channels such as Facebook, TikTok, and YouTube, along with case studies and prevention methods that the public can actually use.

2. The government should amend and improve the Computer Crime Act B.E. 2560 to cover new forms of telephone and online scams such as Deepfake, AI Voice Scam, and Social Engineering, and increase the severity of penalties for repeat offenders by setting a maximum imprisonment of 10 years for those who deceive a large number of people or cause widespread damage, as well as criminal charges against supporters or aiders, such as those who rent mule accounts or platform providers who neglect to control fake accounts.

3. Establish a consultation center, the “Cyber Crime Victim Assistance Center (CCVAC),” with lawyers at the center. Provide advice on the reporting process and legal procedures, assist in filing refund requests from banks and relevant agencies, and have psychologists provide advice to those who are emotionally or mentally affected by being cheated.

4. The Ministry of Education has collaborated with cybersecurity agencies such as ETDA (Electronic Transactions Development Agency) and the Royal Thai Police to develop the “Cyber Safe Youth Program” to help learners distinguish between real and fake information. I would like it to be adjusted to be more clear and concrete.

5. Training should be provided to the general public on how to prevent fraud. These trainings should focus on high-risk groups, such as the elderly and those who are not familiar with technology. Training content should cover how to set up online bank account security, how to check for fraudulent emails, and how to protect yourself from identity theft.

5.2 Conclusion

Call center scams have become a social problem that causes both financial and psychological damage to many people. A study on phone scam victims in Thailand found that both psychological and social factors have a significant influence on the likelihood of a person falling victim to scams. Psychological factors, including motivation, perception, learning, beliefs, attitudes, personality, and self-concept, have a moderate impact on the likelihood of falling victim to scams. Motivation has the highest mean score, indicating that individuals are more likely to believe advice from familiar social groups and feel pressured to make financial decisions under social influence. In the case of phone scams, highly motivated individuals may be more likely to respond to offers that offer unrealistically high returns, such as winning messages, investment returns, or privileges. Motivation also includes external factors, such as social pressure, advice from familiar people, or situations that make individuals feel the need to make urgent decisions. Fraudsters often use external motivation techniques to pressure victims into obeying, such as posing as government officials, warning individuals that they are in legal trouble, or creating emergency situations that leave victims with no time to think carefully.

Similarly, social factors, including reference groups, family recommendations, social roles, and social status, also play an important role. Family recommendations have the highest mean score, indicating that information received from family members is often viewed as more reliable and may influence financial transaction decisions. Family recommendations have the highest mean score, indicating that information or advice received from family members is often viewed as the most reliable source of information and may directly affect financial transaction decisions. Individuals tend to listen to or follow the advice of those close to them without checking further information, which may be a vulnerability that makes them more likely to fall victim to fraud. In addition, the social status and roles of individuals in the family or workplace may also affect the

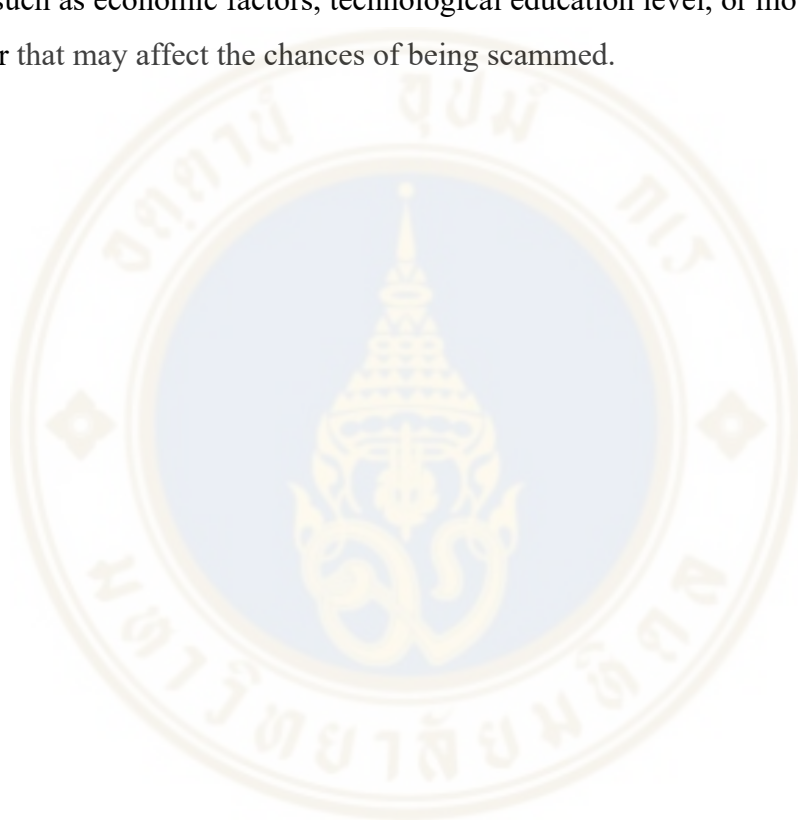
level of trust in the information received. For example, older people or those who are the heads of the family may be persuaded by fraudsters through channels that appear credible or show urgency in making decisions.

When considering the types of scams, email scams are the most common type, followed by identity fraud and phone scams, which highlights the importance of raising awareness of digital and phone fraud tactics, as digital technology is a channel through which fraudsters can easily and quickly reach their victims, especially through phishing emails, which use falsification techniques to trick users into revealing personal information, or identity theft, which often occurs when victims provide personal information to untrustworthy sources, which can lead to financial consequences or even unauthorized access to important accounts. A multiple regression analysis confirmed that both psychological and social factors had a statistically significant positive effect on phone fraud victimization, together explaining 12.10% of the variance. Although they are not the only variables that affect fraud, they are important components that reflect that increasing psychological awareness and enhancing understanding of the role of social factors can reduce the risk of victimization. These findings suggest that increasing individual psychological awareness and promoting social education campaigns can reduce the risk of falling victim to fraud. Future efforts should focus on improving public knowledge about fraud tactics and promoting critical thinking in financial decision-making. and promoting a supportive social environment that emphasizes caution and due diligence before responding to suspicious requests. This study suggests that falling victim to scams is not a single factor, but rather a combination of psychological and social factors. Therefore, developing effective prevention strategies that include education, promotion of critical thinking, and building a supportive community to reduce the risk of falling victim to fraud. Focusing on these strategies will increase individuals' ability to cope with future telephone and digital threats.

5.3 Limitations

1. The data used in this research were obtained from questionnaires filled out by the respondents themselves, which may have errors from inaccurate data (Self-report Bias), such as inaccurate recall of past events or answers based on social expectations (Social Desirability Bias).

2. This research focuses on studying the relationship between psychological and social factors and victimization by telephone fraud, without considering other factors such as economic factors, technological education level, or mobile phone usage behavior that may affect the chances of being scammed.



REFERENCES

- Aunpattanasin, U. (2024). *Guidelines for preventing risky behavior of being deceived in online financial transactions of the elderly in Suphan Buri Province*. Department of Development Administration, Suan Sunandha Rajabhat University.
- Bank of Thailand. (2023). *Pol. Lt. Col. Niwet Aphawasin and the mission to prevent and suppress online financial threats*. https://www.bot.or.th/th/research-and-publications/articles-and-publications/bot-magazine/Phrasiam-6-3/thought-leader_cyberpolice.html
- Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2001). *Consumer behavior* (9th ed.). Harcourt College.
- Boonmee, S. (2023). The threat of call center gangs evolving from economic crime to cybercrime. *Eau Heritage Journal Science and Technology*, 17(6), 19–26.
- Etzel, M. J., Walker, B. J., & Stanton, W. J. (2001). *Marketing* (12th ed.). McGraw-Hill.
- Haphiphat, T. (2024). *A study of the situation of being deceived through online channels: A case study of people aged 15–79 years in all regions of the country*. Faculty of Economics, Chulalongkorn University.
- Kotler, P. (2003). *Marketing management*. Prentice-Hall.
- Royal Thai Police. (2023). Press conference on statistics of online crime reports in the past year and new online threats in the past week. <https://pctpr.police.go.th/blog/?p=21>
- Samart, T. (2022). *Cyber victimization of the elderly*. Department of Sociology and Anthropology, Chulalongkorn University.
- Sanhaphop, W. (2021). *Risk of being a victim of online transaction crimes of students at Srinakharinwirot University*. Faculty of Social Sciences, Royal Police Cadet Academy.
- Schafer, F. P. (1977). *Dye lasers* (2nd ed.). Springer-Verlag.
- Schiffman, L. G., & Kanuk, L. L. (2000). *Consumer behavior and marketing strategy* (6th ed.). McGraw-Hill.

REFERENCES (Cont.)

Solomon, M. R. (2002). *Consumer behavior: Buying, having, and being* (5th ed.). Prentice Hall.

Tsikerdekis, M., & Zeadally, S. (2014). Online deception in social media. *Communications of the ACM*, 57(9), 72-80.

