

Fake it till you make it: the psychological and communication tactics behind “Pig Butchering” scams

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Abstract

“Pig butchering” represents a sophisticated form of cyber-enabled social engineering that combines elements of romance and investment scams. Although existing literature focuses on victims’ experiences, there is a lack of understanding regarding how scammers are trained to implement these strategies. To this end, we analysed a unique data source, scam manuals (i.e. documents guiding scam operations), to uncover the psychological and communication theories that inform their use. Our findings reveal that scammers systematically exploit interpersonal communication, relationship, and motivational tactics to gain victims’ trust and commitment, and to manipulate their self-growth needs. We propose a unified stage model that maps and links psychological and communication theories across the scam stages. We discuss how our model contributes to the broader cybersecurity literature by informing the design of more targeted prevention and intervention strategies that address the human vulnerabilities exploited in advanced cyber-enabled crime.

Keywords pig butchering, *Sha Zhu Pan*, social engineering, cybercrime, romance baiting, cryptocurrency investment fraud

Introduction

Digital technologies and information systems have transformed the way we connect and interact with others. However, this advancement often compromises security and attracts global cybercrime [1]. Among the most prevalent security threats are online scams, which collectively resulted in staggering financial losses of nearly \$10 billion in the USA in 2023 alone [2]. Within the growing spectrum of cybercrime, investment and romance scams emerge as particularly pernicious, as they prey on victims’ financial aspirations and emotional vulnerabilities with alarming precision [3].

Building on the success of these two types of scams, a new, more sophisticated cyberthreat is on the rise: *Sha Zhu Pan* (杀猪盘). This type of scam, originating from China, likens victims to pigs that are “fattened” before being “butchered” financially [4]. In other words, *Sha Zhu Pan* involves scammers who build long-term trust through online relationships before luring victims into fraudulent (often crypto) investments [5,6].

The scale and impact of these scams are staggering. In 2024 alone, the FBI’s Internet Crime Complaint Center (IC3) reported a 66% increase in losses, with a total of USD 9 billion lost to cryptocurrency fraud [7], while a single fraud operation recently accounted for ~\$15 billion in seized cryptocurrency [8]. On a global scale, *Sha Zhu Pan* scams have netted criminal networks an estimated \$75.3 billion since January 2020 [9] and caused individual victims to lose an average of \$155 117 [10]. In some cases, the financial impact is so severe that victims have lost

their life savings or, in extreme cases, have even resorted to suicide [11].

Although prior research has documented the operational stages of these scams [12] and identified certain persuasive techniques [13], the psychological mechanisms that make these scams so compelling remain under-theorized. While some studies describe scammer behaviors in detail [6], they often lack a psychological framework that explains *why* these tactics are so effective at manipulating victims’ emotions, cognition, and decision-making processes. This absence of explicit psychological theorization—such as models of motivation, attachment, and relationship development—limits our ability to understand how attackers systematically exploit human vulnerabilities in digital environments. Without this theoretical grounding, efforts to develop targeted prevention, detection, and mitigation strategies within cybersecurity remain constrained. As such, a deeper, theory-driven understanding is essential to move beyond surface observations and uncover the strategic patterns that make these scams so compelling and destructive in their impact. As such, a deeper, theory-driven understanding is essential to move beyond surface observations and uncover the strategic patterns that make these scams so compelling and destructive in their impact.

Furthermore, integrating communication theories alongside the psychological is crucial, as they can provide unique insights into scammers’ information-sharing patterns, trust-building techniques, and interpersonal dynamics. While such theories have been applied to explain scammer strategies

in studies of romance and investment scams [14,15], they have yet to be fully explored in the context of *Sha Zhu Pan* scams, where sustained communication is central to the scam's success.

Adding to these limitations, previous studies [e.g. 16,17] have primarily relied on secondary sources, such as victim narratives and court documents, rather than first-hand data from scammers, such as scam manuals that entail instructions for scam operations. As alluded to by Wang and Zhou [13] and Wang [18], these manuals are believed to offer detailed, step-by-step insights into how scammers design and execute manipulation tactics to exploit their victims. Despite their potential to illuminate the scam's underlying goals and tactics from the scammers' perspective, these scam manuals have yet to be systematically utilized in the literature. Consequently, the present study aims to address the previously motivated gap in understanding the psychological and communicative theories underpinning *Sha Zhu Pan* scams by examining scam manuals. Building on this foundation, our study seeks to answer the following research questions (RQ):

RQ1: What psychological and communication theories underlie the manipulation tactics found in *Sha Zhu Pan* scams?

RQ2: How do scam manuals guide the application of psychological and communication theories across stages of *Sha Zhu Pan* scams?

RQ3: What relationships exist between the psychological and communication theories outlined in *Sha Zhu Pan* scam manuals?

To answer our research questions, we analysed 26 scam manuals using qualitative content analysis [19]. In doing so, we identified scammers' strategies and linked them to underlying psychological and communication theories. Additionally, we explored how these theories interrelate and work together to achieve the scammers' broader manipulation goals across stages. As a result, we propose a unified stage model providing a comprehensive theoretical understanding of *Sha Zhu Pan* scammers' tactics for exploiting humans.

Our analyses reveal that these scams strategically weave seven psychological and communication theories, such as the Social Penetration Theory (SPT) [20] and Self-Determination Theory (SDT) [21], into their manipulative tactics at various stages of the scam. These findings have practical implications. First, our unified stage model helps law enforcement and cybersecurity practitioners anticipate and disrupt scams; second, it guides the design of targeted educational and technical safeguards to mitigate harm, even as artificial intelligence (AI) enables highly personalized and scalable attacks at an even larger scale [22].

The paper proceeds as follows. We begin with *Background and related work* to situate the study within existing research on *Sha Zhu Pan* scams. *Methodology* then describes our data collection and analytical approach. *Dissecting the psychology behind scam manuals* presents findings aligned with the scam's sequential stages. Finally, *Discussion* addresses implications, limitations, and directions for future research, and *Conclusion* summarizes key contributions.

Background and related work

Evolution

Sha Zhu Pan scams, which originated in China in the early 2010s [23], have grown into a global phenomenon [24]. As these scams have expanded worldwide, has gained traction in scholarship, media, and law enforcement, though the label remains deeply problematic. As Whittaker *et al.* [4] point out, the phrase is a direct translation of a vulgar Chinese metaphor, and its imagery dehumanizes victims by casting them as animals destined for slaughter. Such framing risks reinforcing stigma and fostering victim-blaming attitudes, particularly in contexts where victims are already reluctant to report due to shame or fear of ridicule. Concerns over the harm caused by the terminology have led a number of scholars, advocacy groups, and international organizations to recommend abandoning the label in favor of more neutral descriptors. Terms such as "cryptocurrency investment fraud" [e.g. 6,25], "romance baiting" [e.g. 5,26], "hybrid romance investment scam" [27], and "hybrid investment fraud" [6] have been proposed, though none have yet achieved consistent uptake or precise definitional scope. In this article, following Wang and Zhou [13], Wang and Topalli [12], and Wang [28], we retain the original Chinese term *Sha Zhu Pan* only to ensure clarity for readers and alignment with the existing literature, while acknowledging its troubling implications. Wherever possible, we employ more neutral language to reduce the risk of stigmatization and to emphasize that responsibility lies with perpetrators rather than victims.

As such, *Sha Zhu Pan* is a sophisticated scam that combines elements of romance and investment scams. In this scheme, scammers initially connect with victims on social media or dating platforms, transition to private messaging, and eventually entice them into fake (crypto) investments, promising high returns [13,28]. Through simultaneously exploiting emotional vulnerabilities and financial aspirations, these scams manage to extract substantial sums from victims who often remain unaware of the deception until it is too late [5,13]. Over time, the tactics for luring victims have evolved, particularly since expanding into Western countries after 2018, as scammers broadened their approaches to target a broader range of victims [13]. While romantic manipulation remains central to many operations, scammers now also pose as potential friends, business associates, mentors, or casual acquaintances through various online platforms and chat groups [6]. The adaptability of relationship building allows scammers to maintain prolonged engagement with victims while tailoring their tactics to different cultural contexts and demographic groups.

Furthermore, their technological advancements have fueled their global spread. Scammers employ tools such as fake social media profiles, AI-powered face-changing software to impersonate others in real-time video calls or prerecorded messages, translation software to overcome language barriers, virtual private networks to mask locations, and encrypted messaging apps such as WhatsApp and Telegram to maintain trusted/private channels of communication with victims [12]. These technologies support a corporate-like operational structure where specialized teams collaborate across roles, including victim communication, fake customer support, IT specialists developing fake investment platforms, and money-laundering groups managing illicit funds [12]. This combination of technological sophistication and

psychological manipulation ensures the sustained success of *Sha Zhu Pan* scams across cultural and technological landscapes.

Unfolding the stages

The process of cultivating trust in *Sha Zhu Pan* scams generally unfolds through a series of carefully organized stages, each designed to deepen the victim's engagement and vulnerability. Previous work has established, and our analysis of scam manuals aligns with, the notion that the scam operates through three stages, namely: hunting, raising (also known as grooming or nurturing), and killing (or harvesting) [13].

The first stage begins with scammers relying on databases of potential victims, which are independently established or acquired through identity brokers [12]. Alternatively, scammers may conduct their own information gathering and screening, primarily using social media platforms (e.g. Facebook and Instagram), private messaging apps (e.g. WhatsApp and WeChat), or dating apps (e.g. Tinder) to identify and target their victims [5]. Once scammers identify their victims, they reach out using fake but attractive personas to disguise their true identities [5,23].

Then, in the second stage, scammers work toward establishing and strengthening relationships with their victims, often using prewritten scripts from their scam manuals to express sincere intentions [5]. As grooming progresses, scammers claim a financial background for themselves or a family member and try to determine if their victim is interested in investing [5,13]. Lastly, before transitioning into the third stage, scammers often test the waters by making small requests, such as asking for gifts, to assess the victim's willingness to comply [29,30]. If the victim complies, it signals that a level of trust has been established, giving scammers the green light to proceed to the next stage.

Once trust is established, scammers move to the third stage by initiating fake investment schemes. Initially encouraged to make small investments, victims are first allowed to withdraw fabricated "profits" to build confidence, which then progressively escalates to manipulation into committing increasingly larger sums that they ultimately cannot withdraw [13]. Scammers may eventually alter the platform manually [6] to complete the deception by displaying severe losses, effectively "butchering" the victim financially and stealing their funds.

Continuities and distinctions from other online frauds

Online fraud encompasses a wide spectrum of strategies, from transactional, one-off schemes to prolonged, immersive manipulations. *Sha Zhu Pan* exemplifies the latter, but its techniques are not entirely novel. Instead, it represents a hybrid form that integrates elements of earlier romance, investment, and advance-fee fraud while scaling them up through organizational infrastructures.

Advance fee fraud, such as Nigerian 419 schemes, was among the earliest to be studied in depth. They relied on formulaic appeals to urgency, authority, or sudden wealth, typically executed through mass emails with little attempt to build lasting rapport [29,31,32]. Romance scams, by contrast, introduced sustained psychological grooming, staged self-disclosure, and identity construction to create intimacy, as Whitty [29,30] and Cross *et al.* [33]

have shown. Victims came to perceive genuine emotional bonds before financial requests emerged. Investment scams developed in parallel, using the language of financial literacy and professional credibility to elicit trust, with research noting how scammers drew on discourses of risk, opportunity, and authority to persuade [34]. More recent studies show how investment frauds increasingly adapt to digital platforms, leveraging social media to amplify credibility and normalize participation [15].

While *Sha Zhu Pan* scams draw heavily on elements from romance and investment fraud, they also mark a qualitative shift in how these elements are fused and operationalized at scale. As Dulisse *et al.* [35] observe, many contemporary cryptocurrency scams exemplify the reuse of old techniques through new technologies in which offenders replicate interpersonal manipulation and authority-based persuasion strategies that long pre-date crypto markets, yet adapt them to digital infrastructures that enable higher scalability and more immersive deception. What distinguishes *Sha Zhu Pan* from traditional romance or investment fraud, however, is its sustained relational embedding. Unlike conventional romance scams, which typically culminate in emotional exploitation [36], or investment scams, which rely on professional impersonation and transactional urgency [15], *Sha Zhu Pan* scams deliberately merge both modes. The scammer assumes a dual identity, emotional partner and financial mentor, maintaining daily contact over weeks or months while gradually transitioning conversations from intimacy to investment [e.g. 5,6,13,27]. This hybridization, combined with the industrialized nature of the scams and the use of crypto-based payment systems and fraudulent trading platforms, allows offenders to simulate legitimate market activity and obscure financial flows, making the deception both more believable and harder to detect [6,12,35]. In this sense, *Sha Zhu Pan* represents not merely an evolution of romance or investment fraud but an integration of the two, technologically enhanced and industrially organized to sustain long-term psychological manipulation and large-scale financial extraction [35].

A state-of-the-art analysis

In recent years, *Sha Zhu Pan* scams have drawn the attention of researchers and law enforcement (see also Supplementary Material A). This growing focus has illuminated the scams' modus operandi, their unique blend of romance and investment scam features, strategies contributing to their industrialized and scalable nature, as well as their success.

Central to this growing body of work on detailing the evolving tactics used by scammers is Wang and Zhou's model of criminal persuasion [13], which is among the first to link specific tactics to a staged process. Complementing this foundation, Maras and Ives [6] discussed critical dimensions of scammer's evolving strategies, such as advanced impersonation, multichannel social engineering, and adaptive coercion. They also noted the structural and industrialized nature of these scams, e.g. hierarchies, quotas, and procedural standardization.

Although such work has comprehensively mapped the what (tactics) and the how (execution) of *Sha Zhu Pan* scams, it inadequately addresses the why behind their sustained effectiveness. For instance, while Wang and Zhou [13] catalog tactics such as staged self-disclosure and urgency induction, their work does not explain how these methods exploit universal psychological needs, such as the human drive for social connection or financial security,

to override victims' skepticism. Similarly, Maras and Ives' [6] documentation of technical obfuscation (e.g. blockchain "chain hopping") fails to link these maneuvers to communicative strategies that enhance perceived legitimacy. This lack of theoretical integration impedes both scholarly coherence and practical countermeasures.

In addition, scholars to date have mainly focused on examining *Sha Zhu Pan* scams from the perspectives of victims through interviews [27] or articles or court documents [6]. However, firsthand insights into the strategies and tactics of perpetrators, e.g. through interviews with the same, remain rare, though offender-focused studies in other fraud contexts [e.g. 37,38] illustrate the value of such approaches. Not surprisingly, scholars such as Wang and Topalli [14] have repeatedly called for the use of alternative sources, such as scam manuals, to enhance our understanding of these schemes.

Given these limitations, our study advances the field by integrating psychological and communication theories into a unified process model. Drawing on scam manuals, a novel data source highlighting scammers' strategies, we examine how these theories are operationalized in the structure, language, and progression of scam interactions, thereby illuminating the mechanisms behind scam effectiveness. Consequently, this approach also reframes victim vulnerability as a reflection of universal human tendencies rather than personal failure and provides more constructive insights for prevention, early detection, and mitigation.

Methodology

Data acquisition

Following the call of various researchers to study primary documents from scammers [e.g. 14], our study relies on documents shared on various publicly accessible Telegram channels—an approach designed to ensure that there are no concerns regarding privacy or confidentiality [12]. These channels, which we were initially introduced to by the Global Anti-Scam Organisation (GASO) [39], distribute scam manuals and educational materials on fraudulent activities, primarily in Chinese [10]. To confirm the data's exclusivity, we conducted an in-depth open source intelligence investigation across the major search indexes Google, Bing, Brave, Yandex, and Baidu to find any sources referencing the documents or channels. Our efforts revealed that links to these documents and channels are absent from the indexed web. Overall, we acquired 42 scam manuals, some with a limited scope of stages (e.g. the hunting or raising stages) and others with a broader scope covering all phases of the scam. Following Glaser and Strauss' [40] saturation principle, we analysed these scam manuals until we reached informational redundancy, resulting in a final dataset of 26 scam manuals. Lastly, to prepare the content for analysis, we relied on translators (e.g. DeepL) to convert the content into English. Subsequently, a native speaker reviewed key points of interest in the translated scam manuals to ensure precision and accuracy of critical content.

Overview of scam manuals

The scam manuals analysed in this study are operational training documents designed to instruct scammers on how to manipulate

victims throughout the course of the scam. This material varies in length and scope, ranging from brief, stage-specific documents of three to five pages to more comprehensive ones exceeding 200 pages. Their structure is typically modular and instructional, with most following a list-based format, using directive, imperative-style language to guide scammers through specific actions, emotional triggers, conversation scripts, and behavioral expectations. Others present step-by-step walkthroughs using narrative case examples, simulated dialogues, or even process diagrams. Several others were formatted as PowerPoint slides, Excel sheets, or annotated PDFs.

Content-wise, the scam manuals span a wide array of psychological tactics, including emotional rapport-building, identity construction, timed self-disclosure, and how to maintain their fake personas' integrity over time. Some are highly specialized, addressing only the early "hunting" phase, while others span all stages of the scam. Certain documents also include curated lists of romantic quotes, luxury brand references, or niche lifestyle cues such as fine wine knowledge, classical music, and elite hobbies such as golf. Also, across manuals, scammers are consistently framed as "salespeople" and victims as "clients" or "customers," with cryptocurrency platforms referred to as "products" and victim payments labeled as "cuts," reflecting a pseudocommercial mindset. Notably, this corporate-style "customer service" framing reflects Wang and Zhou's [13] observation that *Sha Zhu Pan* syndicates assign scammers distinct roles, including dedicated fake customer service, to manage victim interactions in a coordinated call center.

While the manuals function as practical "how-to" guides, their depth, specialization, and professional tone suggest they were likely created by experienced scammers or managers within organized crime groups rather than by isolated individuals. In several cases, the manuals were written in a mentoring style, guiding readers through common pitfalls and offering advice. Although there was no verbatim overlap between texts, notable parallels emerged in their structure, sequencing, and thematic progression. For instance, nearly all manuals that cover all three stages instruct scammers to systematically collect five key personal details, namely age, occupation, marital status, home ownership, and vehicles, while also guiding them to craft overlapping elements of their persona, including narratives about family, education, finances, and relationship history. Further, we did not encounter evidence of systematic updates or modified versions, and the precise origin and distribution of the manuals remain unknown. These uncertainties underscore both the sophistication of the operations and the limitations of the dataset in which we can describe content and structure, and identify common tactics, but cannot definitively trace authorship, dissemination, or evolution over time. Table B5 in the Supplementary Material B provides a summary of the 26 scam manuals analysed in this study, including their leak date, word counts, stage coverage, and thematic focus.

Qualitative content analysis

We conducted a qualitative content analysis [19] of the leaked scam manuals to systematically map scammers' tactics to established psychological and communication theories. Specifically, we employed conceptual content analysis, which examines textual material to identify the concepts present [41], in the first two steps and relational content analysis [42] in the third step to examine

how these tactics relate to one another and to broader theoretical frameworks, an overview of which is illustrated in Fig. 1.

In addition, this allowed us to discover how tactics are layered and interlinked to produce distinct psychological effects. Our analysis followed a structured three-step process combining inductive and deductive approaches [43]. Inductive approaches allowed us to uncover significant themes inherent in their data without the constraints of structured methods [44], while deductive approaches draw on existing knowledge to guide the analysis [43].

First, we used an inductive approach and open coding, independently analysing scam manuals and highlighting segments describing manipulation tactics as they appeared. We then compiled the tactics in a shared document and met to reconcile differences, discuss emerging patterns, and refine our coding approach to consolidate overlapping tactics (for an excerpt of the codebook; see Table 1). After analysing a total of 26 scam manuals and observing no emergence of new tactics, we concluded that theoretical saturation [40] had been reached and moved on to the next phase.

Second, to ground the identified tactics in established theory, we shifted to a more deductive mode. This meant that we not only sought to identify strategies that had already been identified in previous research on online romance, investment, and newly emerging hybrid romance–investment scams. Instead, we expanded our scope to include theories from social psychology, particularly motivational and interpersonal relationship theories, and interpersonal communication. Our analysis yielded 38 relevant theories and models, ranging from well-established frameworks, such as Cialdini’s persuasion principles [45], to less commonly applied but contextually fitting perspectives. Rather than filtering the list in advance, we mapped each identified tactic to one or more of these theories based on conceptual fit and relevance. As such, this order of operations was intentional: evaluating how each theory related to the observed tactics helped us assess its explanatory power in context. Through several rounds of discussion, we refined both our mappings and our theory set, comparing overlaps, discussing theoretical breadth, and eliminating frameworks that were too narrow, duplicative, or limited in scope. This iterative process ultimately led to a final set of seven core theories that best captured the psychological and communicative logic embedded in the scammers’ methods and informed the structured mapping presented in the next step (see Supplementary Material C).

Finally, in the third step, we used relational content analysis to explore how these theories co-occurred and interacted across different scam stages to build sustained trust and influence. For example, during the “raising” stage, scammers used gradual self-disclosure to simulate intimacy while simultaneously maintaining emotional consistency to foster attachment and security. These interwoven tactics revealed how multiple theories operate together to increase manipulation effectiveness. Through further joint analysis, we developed a structured mapping of theories across the key stages of the scam to capture how combinations of tactics reinforce and support one another (see Fig. 1).

Dissecting the psychology behind scam manuals

Our analysis of scam manuals revealed seven theories operating within three distinct stages, which can be broadly categorized into

communication and psychological domains. The communication theories include Impression Management Theory (IMT; [46]) and SPT [20], both of which explain how scammers manage disclosure and presentation in order to cultivate trust. The psychological theories encompass Attachment Theory [47,48], Sternberg’s Triangular Theory of Love [49], and Interdependence Theory [50], all of which account for how emotional bonds and relational dependence are strategically fostered. In addition, two broader motivational psychology frameworks, Maslow’s Hierarchy of Needs [51] and SDT [21], explain how scammers appeal to universal drives for autonomy, competence, connection, and security. Table 2 summarizes these theories and details their application in the scam manuals along with their intended effects on victims. Overall, psychological theories dominate our findings, with communication theories playing a complementary role by showing how psychological tactics are enacted and reinforced in interactional exchanges to create a more cohesive manipulation process.

In the following sections, we elaborate on how these theories materialize within the scam process (RQ1 and RQ2). First, we outline the interpersonal communication tactics, which correspond to communication theories, identified in the scam manuals. Next, we discuss interpersonal relationship tactics and, finally, motivational tactics, both of which are primarily grounded in psychological theories.

Interpersonal communication tactics

Scam manuals direct scammers to initiate contact through “accidental” interactions on dating apps or social media platforms using “packaged” personas. Packaging, repeatedly emphasized in the manuals, refers to crafting a coherent and attractive persona that fits the target’s demographic and psychological traits. This directly relates to IMT, which explains how individuals shape others’ perceptions during social interactions to achieve desired outcomes [46]. Scammers are encouraged to create personas that often reflect a loyal, humble, and altruistic character—wealthy yet down-to-Earth, charitable, and emotionally available. To further enhance believability, scammers are told to share geographically and culturally contextualized photos and anecdotes. Manuals also recommend showcasing an aspirational lifestyle to reinforce credibility: “Social circle (birds of a feather flock together; a good social circle reflects one’s living standard). In order to demonstrate one’s material abundance and wealth, one [should] completely utilize socializing with friends and some details of daily life to reflect it” (M15, p.7).

Moreover, rather than overwhelming victims with personal disclosures, scammers are advised to guide conversations strategically, as SPT [20] suggests. Early exchanges also serve as a structured screening process to gather basic personal and financial data. Screening enables scammers to identify lucrative targets based on background, financial standing, and vulnerabilities. Another tactic embedded early in conversations is the subtle introduction of investment topics to test financial interest and literacy. This tactic not only signals the scammer’s own interest in investing but also tests the victim’s receptiveness to financial discussions.

IMT

IMT [46] posits that individuals actively control how they are perceived by others in social interactions, using strategies such as

Table 1 Excerpt from the codebook with example quotes from manuals.

Code	Higher-level code	Example quote
Packaging	Impression Management Theory	“Personality packaging; 1. Sunny, cheerful, sensible, filial. Kind, loving, aware of social ills, and the handling of each story we package. It shows that we are a cultured, and dedicated person. We are rich but not extravagant, which reflects our cultural culture. 2. Through the charity story packaging, we should reflect our fine traditions and be a person that everyone hopes and likes, to create our image perfectly. 3. Through some family stories, we tell the packaging that I am a very filial person, the story packaging of parents, the usual chat packaging, and the daily situation story situation.” (M4, p.2)
Status signaling	Impression Management Theory	“You should learn to use life photos to show your high value, which will be of great help to you. Similarly, in the process of chatting, knowing how to show your higher value will help increase customers. A good impression of you. However, how to show higher value? Many people make this mistake: I am a manager in a listed company, earning tens or even hundreds of thousands of yuan a month. This is not showing higher value, but showing off, and customers will think I am a bit exaggerated. The correct way to open it is to tell a story and indirectly demonstrate your higher value.” (M9, p.11)
Screening	Social Penetration Theory	“Screen the customer base by looking at where they are from, their name, age, job, income, and family situation [...] The main purpose is to understand the client’s information and then screen out the client’s investment intention and the client’s funds.” (M10, p.1)
Reciprocal disclosure	Social Penetration Theory	“Conversation Guidelines: Avoid questions like ‘Hi, what are you doing?’ Instead, reference their social media posts or photos (e.g. ‘I saw your photo of that meal. It looks delicious! Where was it taken?’). Avoid one-sided Q&A formats. Answer questions and then follow up with your own, creating reciprocal engagement. Pace the conversation [...] Keep conversations brief but engaging. End them with promises to reconnect later, leaving the client anticipating your return.” (M22, p.1–2)
(Emotional) Availability	Attachment Theory	“Early relationships are fragile and require extra care [...] they mimic the role of a caring partner. Thoughtful Gestures: Ask about their day. Remember important dates (e.g. birthdays, anniversaries). Offer reassurance during tough times.” (M25, p.2)
Romance	Sternberg’s Triangular Theory of Love	“The most beautiful thing is that one day in the future, I will kiss you before going to bed, hug you in the middle of the night, and wake up to you.” (M8, p.12)
Romantic intimacy	Sternberg’s Triangular Theory of Love	“Focus on cultivating feelings, sudden stories, for example, today I was driving to work, because the road was too congested, and then I rear-ended someone, a shocking story, share emotional experiences with customers, how miserable it is, be open-hearted, exchange experiences for personal investment stories, and show the family situation of the three parties. The above stories need to be connected with the previous preparations.” (M2, p.4)
Future-orienting	Sternberg’s Triangular Theory of Love	“How many children will we have in the future? 6: I think there must be a big yard around our house, where we can raise some flowers and plants, or pets. When our children are playing in the yard, the atmosphere must be great. 7: What school do you want our children to go to in the future? (Of course it should be a high-end school, so that we can instill money values in him)” (M7, p.22)
Dream-building	Interdependence Theory	“If you can ask the customer’s hobbies and interests when the customer’s dream is best[...] want is the best, but this should be in the chat after the heat of the mention, otherwise the beginning of the hobbies will certainly not tell you his dream. If you know the customer’s dream, then customer’s dream is our dream, customer’s interest is our interest.” (M11, p.1)
Esteem	Maslow’s Hierarchy of Needs	“First, affirm him: You are great. Investors in cryptocurrency are all forward-thinking people. With such vision and judgment, they must be excellent in life.” (M15, p.17) “Tell the client that you have been very successful in your operation and your progress is much faster than mine. I think you can consider arranging some funds to start and open a real trading account of your own.” (M16, p.23)

Table 1 Continued

Code	Higher-level code	Example quote
Self-actualization	Maslow's Hierarchy of Needs	"People who have succeeded in investing will recognize themselves more and more, and will enter a state of enjoyment in life. They continue to improve their investment system, and they can slowly and leisurely become richer and richer, and the richer they become the more leisurely they are, so they don't feel like they have nothing to do." (M13, p.1)
Competence scaffolding	Self-Determination Theory	"Ask the client if he is interested in learning from you... then you can teach him well and let him invest in cryptocurrencies to earn more. The money is good for our future. Then you can start teaching the customer what to do." (M17, p. 2)
Fear of missing out	Self-Determination Theory	"Lay the groundwork for the next insider market, and that insider market information is not always available. Let customers know that insider information is very valuable and rare, and there must be a sense of urgency. In addition, the funds cannot be too little, otherwise you will not make much money. Take my best friend as an example. She missed the market and made a lot less money because of the problem of deposit." (M3, p.1)

Note. The "code" column refers to the code name assigned through inductive coding, while the "higher-level code" column represents the category established after deductive coding.

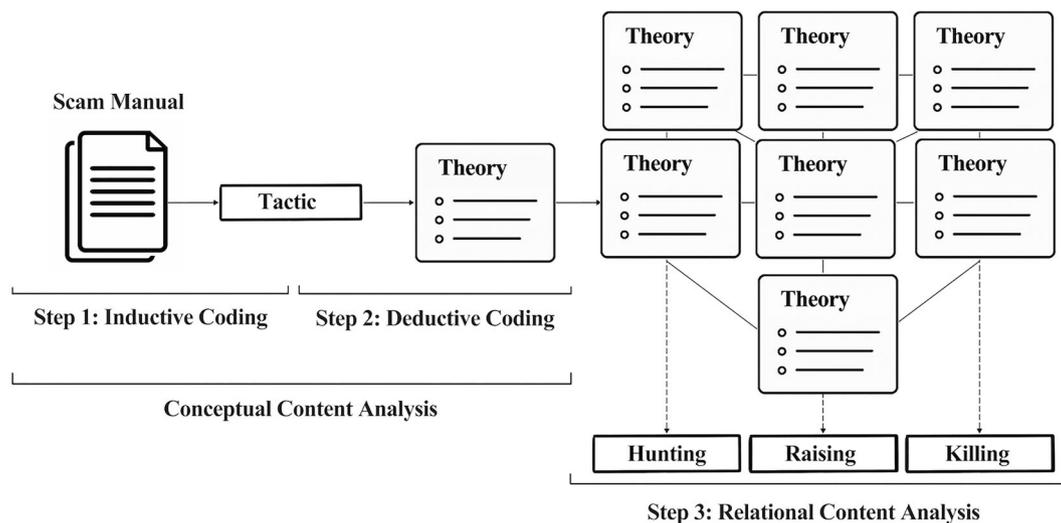


Figure 1 Overview of the methodological process.

Note. This figure provides an overview of the methodological process, illustrating how the content analysis involved both conceptual and relational approaches and conducted in the three steps: inductive coding of tactics from manuals, deductive grouping under theories, and linking and mapping these theories into stages.

self-presentation, role performance, and situational adaptability. Core to IMT is the idea that the presentation of self is dynamic and context-dependent, continuously modified based on feedback from the audience [46,52]. Scammers apply this by constructing personas that align with victims' expectations. Manuals recommend "making up stories [...] starting from entrepreneurial experience, family situation (emotional experience)" (M3, p.1). This instruction mirrors IMT's concept of role performance [46,53], where a believable narrative is crafted to project competence, trustworthiness, and relatability. Similarly, manuals emphasize revealing visual and contextual cues by instructing scammers to "subtly reveal your appearance, daily life, and activities through pictures" (M20, p.1), which corresponds to front-stage behavior in

IMT, where setting, appearance, and actions are orchestrated to manage impression [46,54]. IMT emphasizes situational consistency, where individuals adapt their self-presentation to align with expectations and social norms. Manuals enact this by advising scammers to adjust their background details depending on the victim's profile: "You can be unmarried, divorced, or widowed, and have children. The specific situation depends on the actual situation and age of the client" (M15, p.5). This reflects IMT's emphasis that impression management is an ongoing, flexible process that requires continuous modification of self-presentation based on feedback, observed in other online fraud contexts where offenders calibrate messages and behavior to target responses [e.g. 55]. Finally, the use of aspirational status cues aligns with IMT's

Table 2 Summary of psychological and communication theories applied in *Sha Zhu Pan* scam manuals.

Theory	Domain	Application	Intended effect on victim
Impression Management Theory	Communication	Guiding the creation of an authentic and credible persona through careful self-presentation	Perception of the scammer as a responsible and altruistic individual with strong family relationships and investment experience
Social Penetration Theory	Communication	Gradual disclosure of fabricated personal details, screening of victim's profile	Perceived intimacy and trust
Attachment Theory	Psychology	Fostering strong emotional bonds and reliable emotional presence through consistent communication and emotional availability	Strong emotional attachment to and trust in the scammer
Sternberg's Triangular Theory of Love	Psychology	Simulating intimacy through personal stories and vulnerabilities; passion through romantic gestures; and commitment through promises of lifelong devotion	Belief in a genuine romantic relationship
Interdependence Theory	Psychology	Creating cognitive interdependence through shared financial goals and mutual future planning	Mental and emotional investment in the relationship
Maslow's Hierarchy of Needs	Psychology	Targeting hierarchical needs: security (financial safety), belonging (intimate relationship), esteem (wealth status), and self-actualization (life goals); exploiting desires for complete fulfillment	Desire for fulfillment through a meaningful relationship and wealth
Self-Determination Theory	Psychology	Appealing to the psychological needs for autonomy over relationships and financial decisions; competence through fabricated successful investments; and relatedness through keeping up with trends (i.e. FOMO)	Motivation to stay in contact with the scammer and put money in the crypto investment opportunity

focus on managing impressions to appear desirable yet authentic [46], where scammers are cautioned about what materials to share with victims: "The materials and content must be close to life and reality. The materials of the character design should be put into life materials as much as possible, and the materials of clothing, food, housing, transportation, and toys must also reflect the truth! (Try not to use artistic photos that are too handsome," (M13). Together, these tactics illustrate how scammers systematically apply core principles of IMT to build credibility, maintain engagement, and strategically influence their victims' perceptions throughout their interaction.

SPT

Relationship development, according to SPT [20], follows a gradual and systematic process of self-disclosure, moving from superficial information to intimate personal details. This is often described using the "onion model," a core metaphor within SPT that conceptualizes relational closeness as unfolding through progressive layers of self-disclosure where the outer layers represent superficial details (e.g. occupation, leisure interests, or general lifestyle information), and the deeper layers correspond to

more intimate, personal disclosures (e.g. family history, emotional struggles, or long-term life goals) [20,55]. The manuals explicitly reference this progression and the onion metaphor, advising that "conversations that peel the onion layer by layer often yield surprising results and foster meaningful relationships" (M21, p.8) and emphasizing that scammers should "peel back conversational layers like an onion" (M21, p.2). These instructions directly mirror SPT's conceptualization of relational depth as a managed sequence of disclosure and reciprocity [55,56,57]. By instructing scammers to proceed "layer by layer" (M21, p.7), the manuals demonstrate an implicit understanding that premature intimacy can trigger suspicion, while gradual, responsive sharing maximizes perceived authenticity, a dynamic well established in communication research on deception and trust formation [58,59].

Moreover, SPT posits that self-disclosure is selective and reward-driven, meaning individuals disclose information when the perceived rewards (e.g. emotional closeness, validation, or trust) outweigh potential risks [20,57]. In the scam context, initial conversations serve as a screening process, a term explicitly used in the manuals to describe how superficial exchanges are used to gather key information about the target and gauge

their responsiveness, emotional openness, and potential profitability. As described in one manual: “Obtain potential information from customers, screen whether the customers are our development targets” (M3, p.1). Thus, scammers do not simply mimic the natural progression of intimacy described by SPT, but rather deliberately apply its principles, using staged self-disclosure as a strategic tool to assess, select, and manipulate potential victims.

Interpersonal relationship tactics

Following initial trust establishment during the raising phase, scammers gradually work to intensify emotional dependency by maintaining consistent and attentive communication, which is a central aspect of Attachment Theory [47]. Scammers are encouraged to be persistent in demonstrating concern for the victim’s daily life. Conversations are steered toward nostalgic reflections, with scammers encouraged to slowly reveal their own fabricated emotional stories.

Expanding on this emotional base, scammers are directed to introduce aspirational elements into the relationship. As noted in one manual, “After the relationship has been confirmed, we need to create a dream for the customer” (M7, p.22). This “dream-building” involves painting an idealized future together, thereby reinforcing the illusion of a shared emotional and financial destiny as proclaimed by Interdependence Theory [50]. To make the emotional bond appear authentic and profound, scammers are instructed to emphasize values such as loyalty, communication, and commitment, framing the relationship as serious and enduring. Such strategies are in line with Sternberg’s Triangular Theory of Love [49]. Some manuals also provide specialized strategies for victims, who are not receptive to romantic advances. In such cases, scammers are advised to pivot toward familial themes, particularly by discussing children and family life and showing care and attentiveness toward the victim’s children. By tailoring the emotional narrative to the victim’s receptiveness, whether romantic or friendly, scammers strengthen the illusion of a genuine relationship.

Attachment Theory

Attachment Theory explains how emotional bonds are formed and maintained through perceived availability, responsiveness, and reliability of significant others [47,48]. Central to the theory is the idea that people develop internal working models, which are mental representations that shape expectations about trust, dependence, and care in close relationships [60]. In the manuals, scammers deliberately activate and shape these internal models by simulating the behavior of a secure attachment figure. They establish themselves as reliably attentive and emotionally responsive partners, often through regular communication and reassurance: “After initial interactions, clients [victims] may rely on you more [...] Ensure clear communication and reinforce your role as their confidant” (M24, p.8). This strategic responsiveness meets the victim’s needs for proximity and fosters a felt sense of security, which research shows is essential for the development of attachment bonds [48].

Once trust is established, scammers escalate intimacy by disclosing emotionally charged personal narratives, frequently involving themes of loss, abandonment, or relational trauma. For in-

stance: “During the time when I lost my relationship, I could hardly eat or sleep well [...] (Let customers [victims] know that we are people who value relationships very much)” (M7, p.21). These disclosures serve dual functions: they model vulnerability, a key predictor of attachment closeness [40], and they prompt victims to reciprocate with their own emotional material. Manuals explicitly instruct scammers to foster such mutuality: “Let the customer [victim] take the initiative to care about you, by this time your relationship is one step closer” (M1, p.36). This dynamic echoes the core attachment process of caregiving activation, where individuals respond to perceived vulnerability in others with emotional investment and support [48]. Thus, the scammers’ strategy is not merely about appearing emotionally available, but about actively gauging the victim’s attachment expectations to maintain compliance and emotional dependence.

Sternberg’s Triangular Theory of Love

Sternberg’s Triangular Theory of Love [49] conceptualizes love as comprising three core components: intimacy (feelings of closeness and emotional bonding), passion (physical attraction and romantic feelings), and commitment (decision to maintain the relationship). Later research emphasizes that perceived balance among these elements shapes relationship authenticity and satisfaction [61,62].

Scam manuals provide specific tactics for cultivating each element. Intimacy is cultivated by encouraging scammers to express sympathy for the victims’ past hardships, such as experiences of betrayal or career instability, using messages such as, “During our chat, I also felt that you are someone who deserves to be loved” (M12, p. 160) to establish an emotional connection and shared vulnerability. Passion develops through romantic gestures and language, with scammers instructed to frame their growing attraction as deepening beyond physical appearance, as in, “What attracted me at first was your appearance, but what struck me was your character and thoughts” (M5, p.1). Commitment is reinforced by expressing a desire for a lasting partnership, exemplified by a quote provided in the manual for use with victims: “I don’t want short-term tenderness, I just want your lifelong companionship” (M8, p.13). One manual even explicitly equates a “perfect relationship” with the triadic combination of passion, intimacy, and commitment (M13, p.1), reflecting the goal of achieving Sternberg’s consummate love, that is, the most complete form encompassing all three components [49]. Such direct references suggest that scammers consciously aim to operationalize Sternberg’s framework to guide interactions and construct a convincing illusion of an ideal, enduring relationship.

Interdependence Theory

As relationships evolve, Interdependence Theory [50,63] explains how relationship satisfaction and commitment depend on the perceived rewards, costs, and mutual dependence between partners. Over time, as partners intertwine their goals and outcomes, cognitive interdependence develops, a mental shift where one begins to think in collective terms (“we” instead of “I”) [64]. Scam manuals deliberately cultivate this illusion of shared fate. Scammers are advised to elicit victims’ aspirations and expand on them: “After the relationship has been confirmed, we need to create a dream for the customer [victim] [...] We can discuss with the customer [victim] here about buying a house of our own in the future” (M7, p.22).

By positioning themselves as invested partners in these dreams, scammers prompt victims to align financial and emotional goals with the imagined shared future. This tactic is further emphasized through escalation strategies such as, “If the customer’s [victim] little dream is to buy a car, we are also going to buy a car [...] if he is trying to buy a Honda, we have to persuade him to buy a Mercedes or a Porsche together” (M11, p.1). This strategy goes beyond simply building emotional commitment, as emphasized in Sternberg’s theory [49], as it specifically targets material interdependence and encourages victims to fuse financial and life goals with the scammer’s fabricated narrative. In this context, scammers exploit the relational calculus of interdependence, where the greater the shared emotional and financial investment, the higher the perceived cost of withdrawal. Shifting the victim’s focus from independent aspirations to ambitious shared dreams, scammers exploit the transformation of the motivation principle in Interdependence Theory [65], where sacrifices and investments increasingly feel natural for the sake of the relationship. This synchronization of intimacy with material aspiration creates a dependency structure that locks victims into the relationship and ultimately sets the stage for financial exploitation, masked as a joint pursuit of a better future.

Motivational tactics

In the early stages, i.e. during the hunting phase, scammers work to build a sense of familiarity, warmth, and emotional connection. As trust deepens, scammers gradually shift the focus toward personal growth and ambition as reflected in Maslow’s Hierarchy of Needs [51]. Rather than introducing financial opportunities outright, they are advised to encourage victims to reflect on their lives and pursue greater achievements. Scammers are also encouraged to give victims a sense of control over their decisions. This kind of staged autonomy strengthens the illusion of authenticity, presenting the relationship as mutually respectful rather than manipulative, which aligns with SDT [21]. Finally, scammers frame the investment opportunity as a rare and fortunate chance: “Let the customer [victim] feel that he is lucky to be able to participate, and taking him to invest in cryptocurrency is you helping him, not him cooperating with you” (M19, p.25). To deepen the victim’s emotional commitment, scammers are told to give the victim a false sense of competence and progress: “Let them experience controlled wins and losses, giving them a sense of capability” (M22, p.2). Ultimately, these experiences increase the victim’s trust in the scammer’s advice and create the illusion of personal growth, just as their financial vulnerability escalates.

Maslow’s Hierarchy of Needs

Viewed through the lens of Maslow’s Hierarchy of Needs [51], scammer strategies can be understood as progressively adapting to the victim’s shifting psychological priorities, from basic belonging to esteem and self-actualization. Maslow proposed that individuals strive to fulfill needs in a hierarchical sequence, from physiological and safety needs to love/belonging, esteem, and ultimately self-actualization [51].

The manuals demonstrate a clear operationalization of this progression. One even explicitly instruct scammers to ground their tactics in this framework, noting that “[...] these [conversation] skills are rooted in Maslow’s Hierarchy of Needs, which empha-

sizes human needs for safety and respect. To win someone’s favor, make them feel relaxed and valued” (M21, p.3). This instruction mirrors the lower tiers of Maslow’s framework, where safety and belonging are precursors to trust and openness. Early stages in the scam address basic needs for (emotional) safety and belonging, replicating what Maslow identified as the conditions under which belongingness needs are met [66].

As the interaction progresses, scammers shift toward targeting esteem needs, using appeals that reflect Maslow’s distinction between self-esteem (achievement, mastery, and independence) and the esteem given by others (recognition and respect) [51]. Appeals to self-esteem are seen in explanations such as “People who have succeeded in investing will recognize themselves more and more, and will enter a state of enjoyment in life” (M13, p.1), which frame investing as a courageous pursuit of personal achievement. At the same time, they manipulate esteem from others by portraying hesitation as weakness, outdated thinking, or failure to live up to others’ expectations.

Maslow suggested that when esteem needs are met, individuals are motivated toward self-actualization, the pursuit of personal growth and fulfillment [66]. Scam manuals exploit this by linking investment success to self-development, thus turning the victim’s intrinsic drive for improvement into a mechanism of control. The motivational arc of the scam therefore parallels the upward movement in Maslow’s hierarchy where initial reassurance satisfies safety needs, emotional engagement meets belongingness needs, and the promise of financial success fulfills esteem and self-actualization drives. In this way, the scammers’ progression mirrors and manipulates the hierarchical organization of human motivation as theorized by Maslow to push victims to believe their financial participation will allow them to progress toward a more fulfilled and respected version of themselves [67], and conveniently bind their sense of personal growth to financial investments.

SDT

SDT provides further insight into how scammers sustain victim engagement by manipulating intrinsic motivational processes. According to Deci and Ryan [21] and Ryan and Deci [68,69] humans have inherent tendencies toward psychological growth when three basic psychological needs are met: autonomy (the need to feel in control of one’s own choices and actions), competence (the need to feel capable and effective in one’s endeavors), and relatedness (the need to form meaningful connections with others) [21]. When these needs are met, individuals internalize behaviors and experience them as self-endorsed rather than externally imposed.

Manuals demonstrate deliberate use of these motivational elements. Relatedness is manipulated through the Fear of Missing Out (FOMO; [70]) as scammers create a sense of urgency and exclusivity, making victims feel that participating in the investment opportunity is essential to maintaining their social and financial standing. By framing the investment as a rare chance to join a “high-reward” group or trend, scammers exploit victims’ desire to belong and avoid missing out on what is perceived as a socially affirming experience. As one manual instructs, “People who know how to make money do not consider how to save money to accumulate wealth, but know how to use the resources around them to make money. Only by seizing opportunities can they make more wealth” (M2, p.5).

Table 3 Unified stage model of *Sha Zhu Pan* scams.

Theories/stages	Hunting	Raising	Killing
Impression Management Theory	Full	Partial	Partial
Social Penetration Theory	Full	Partial	Partial
Attachment Theory	N/A	Full	N/A
Sternberg’s Triangular Theory of Love	N/A	Full	Partial
Interdependence Theory	N/A	Full	Partial
Maslow’s Hierarchy of Needs	Partial	Partial	Full
Self-Determination Theory	Partial	Partial	Full

Note. This model illustrates the stage-by-stage application of theories, where “full” indicates comprehensive alignment with a theory’s core components, and “partial” means only some elements of the theory are reflected in the tactics, without representing the theory in its entirety at a particular stage.

Autonomy is addressed by carefully balancing guidance with appeals to independent decision-making, emphasizing that final choices rest with the victim, with scam manuals instructing the use of phrases such as “You have to make your own decisions” (M8, p.16) to reinforce this sense of autonomy. This strategy mirrors SDT’s insight that perceived self-determination strengthens commitment [21]. By giving victims an illusion of agency, scammers ensure that continued investment feels self-directed even when externally imposed.

Competence is nurtured by scammers offering to mentor victims, presenting investment as a learnable skill, and guiding victims through small, achievable goals. SDT holds that feelings of competence emerge when individuals perceive effectiveness and progress in meaningful pursuits [68,69]. Manuals instruct scammers to simulate this through staged “wins,” such as: “Set small profit goals, combine with sales talk to wash cash out, let him realize that these goals are really, everything you said is achievable” (M19, p.26). Such tactics manufacture evidence of efficacy, strengthening the victim’s belief in their financial capability and in the scammer’s credibility as a guide. In doing so, scam manuals guide scammers to exploit victims’ need for competence, as well as their need for autonomy through calculated decision-making. By satisfying these psychological needs, scammers create an environment where victims feel confident, connected, and in control, and thus become more willing and comfortable to escalate their financial investments.

Theoretical interrelationships across scam stages

The following sections provide a stage-by-stage examination of how psychological theories co-occur and interact throughout the scam process (RQ3). To synthesize and visually represent these interrelationships, we introduce a unified stage model (see Table 3) that maps how key theories evolve and intersect across the scam’s trajectory.

The model is unified in that it integrates multiple theories into a single, structured representation, and it is a process model because it reflects how scams unfold over time through distinct, sequential stages. Further, we distinguish between full and partial application of theories. Full application indicates the comprehensive use of a theory’s principles at a given stage, while partial appli-

cation refers to the selective use of certain principles or concepts. The level of support for each theory’s application is based on the depth of its appearance in the scam manuals.

Hunting: building initial trust

Although the initial stage is relatively short, it marks a critical intersection of interpersonal communication and motivational dynamics. Here, IMT [46] and SPT [20] work together to shape how relationships are initiated and presented, while Maslow’s hierarchy [51] and SDT [21] help explain why these approaches resonate with victims. Specifically, IMT and SPT provide communicative tools that allow scammers to simulate relational depth. These performances, in turn, activate core psychological needs identified by Maslow’s hierarchy and SDT. For instance, through SPT-guided exchanges, victims are led to perceive a growing sense of intimacy and mutual openness, satisfying Maslow’s tier of belongingness and love and SDT’s need for relatedness. Similarly, IMT’s emphasis on crafting a consistent and emotionally attuned persona serves Maslow’s lower-order safety needs by conveying stability and dependability. In essence, the interpersonal strategies are not just modes of interaction; they are tools for meeting the psychological needs that make the victim more pliable and invested as the scam progresses.

Raising: fostering commitment

This stage, the longest in the scam process, sees the full application of interpersonal relationship theories. Attachment Theory [47] and Sternberg’s Triangular Theory of Love [49] provide the scaffolding for emotional security, while Interdependence Theory [50] fosters the appearance of mutual reliance and a shared future. What seems like deepening intimacy is strategically designed to activate the victim’s need for love, belonging, and cognitive interdependence, where their sense of self becomes increasingly tied to the relationship. Motivationally, this phase introduces a controlled sense of autonomy: victims are encouraged to feel that they are actively choosing to stay, making decisions together, and shaping the direction of the relationship. This perception fulfills SDT’s autonomy need [21] and supports Maslow’s higher-order needs for self-worth and personal meaning [51]. However, these “choices” are subtly engineered by the scammer to serve the manipulation. Thus, the relationship appears equal on the surface, yet it’s grounded in an asymmetrical power dynamic that benefits the scammer. Together, these theoretical forces create a relationship that feels genuine, balanced, and future-oriented and makes the victim increasingly emotionally invested and less likely to question the direction of the relationship.

Killing: growth exploitation

In this final stage, motivational theories take the center stage, where all three of SDT’s core needs and Maslow’s higher-order needs are fulfilled. Victims are led to feel in control of their decisions (autonomy), perceive themselves as capable investors (competence), and believe these shared financial goals strengthen the emotional bond (relatedness) [21,51]. These psychological levers align with Maslow’s higher-order needs, especially esteem and self-actualization, as investments are framed not only as personal

achievements but as shared accomplishments that reflect growth, purpose, and vision [67].

Sternberg's commitment component remains relevant here, as the scammer frames financial collaboration as a tangible step toward a shared future [49]. Interdependence Theory is also at play, as decisions and goals are portrayed as mutual [65]. On the other hand, Attachment Theory [47] becomes less central at this stage as the scam no longer hinges on fostering emotional safety or dependency, having already fulfilled that function during earlier bonding phases. What is sustained now is not emotional security but a sense of partnership and aligned goals.

Meanwhile, SPT and IMT continue to work together. Using SPT, scammers maintain the illusion of relational depth and transparency through personalized updates, and even "lessons learned" from prior financial struggles [20]. At the same time, IMT helps polish a morally compelling persona as scammers often present themselves as using their earnings for charity or community support [46]. Altogether, this stage represents the convergence of all prior strategies, where the full interplay of motivational and interpersonal theories not only sustains the illusion of intimacy and shared purpose but actively enables the act of financial exploitation itself.

Discussion

Advancing theoretical insights

This study examined *Sha Zhu Pan* scam manuals to identify the tactics used by scammers (RQ1), map the underlying psychological and communication theories guiding these strategies across scam stages (RQ2), and explore how these theories co-occur and interact within each stage to fulfill specific objectives (RQ3). We provide three key theoretical contributions that deepen the understanding of the manipulation tactics driving the success of these online scams.

First, our research is the first to introduce interpersonal relationship theories to explain how scammers establish and maintain relationships with their victims. This is particularly significant, given that *Sha Zhu Pan* scams, similar to many online scams, depend heavily on relationships to succeed [5]. While prior work has noted emotional manipulation and grooming tactics, these insights have remained largely descriptive and fragmented. For example, Xie and Duan [16] found that scammers exploit victims' lack of inner security by offering emotional support, while Wang and Zhou [13] noted the strategic use of vulnerability disclosure to lower victims' defenses and stimulate reciprocal self-disclosure. Our findings support and extend these observations by mapping such tactics onto interpersonal relationship theories, which reveal not only what scammers do but also why those actions work. For instance, scammers' emotionally responsive behavior, future-oriented planning, and mutual financial dream-building map onto Attachment Theory [47], Sternberg's commitment component [49], and Interdependence Theory [50], respectively—each helping explain how the relationship feels increasingly safe, intimate, and worth investing in. Importantly, the theories applied are not limited to romantic relationships. As Sternberg notes, love's components, particularly intimacy, can also characterize close friendships [49]. Together, this theoretical framing allows us to systematize previously disconnected observations and better un-

derstand the processes through which emotional bonds are deliberately cultivated.

Second, our research demonstrates how motivational theories can explain the strategies scammers use to maintain victims' engagement over time. In line with previous studies on *Sha Zhu Pan* scams [e.g. 6,13], which highlight how cultivating an illusion of control over victims' funds can boost confidence in their perceived skills, our findings suggest that this illusion extends beyond finances. We reveal that autonomy is also used to give victims a sense of control in their relationship with the scammer, thereby deepening their commitment to the scam. We further demonstrate that scammers uniquely target additional core needs, such as relatedness, while also appealing to lower-level needs, such as love, belonging, and security. Unlike previously explained [e.g. 71,72], they play a critical role even before the victim decides to invest or commit financially. Applying motivational theories, we reveal how scammers frame their manipulation as a pathway to personal development and effectively eliminate potential red flags and convince victims that their investments serve not only to a shared future but also to their own personal growth. This strategy, which we identify as unique to *Sha Zhu Pan* scams, contrasts with traditional online romance scams, where financial requests typically revolve around fabricated crises for the scammer's sole benefit [29].

Third, we developed a unified stage model to illustrate how interpersonal communication, relationship, and motivational theories complement one another and collectively advance and support the scammers' manipulation objectives across different stages of the scam. This extends prior work that has applied theories from criminology, cognitive psychology, and social psychology in a fragmented manner, typically focusing on individual aspects of the scam rather than capturing its full relational and motivational architecture [15,28]. In our stage model, communication theories play a foundational role not only in initiating contact but also in sustaining manipulation across all scam stages. Specifically, they provide scammers with interactional tools that support impression formation, intimacy simulation, and emotional pacing; functions that have previously been acknowledged but not theorized as coherent processes. Thus, our unified stage model builds on this insight by showing how these communicative strategies persist beyond initial rapport-building to enable the psychological scaffolding required for emotional dependency and motivational manipulation.

Implications for practice

Our findings highlight that *Sha Zhu Pan* scams should be understood less as isolated acts of deception and more as coordinated operations sustained by training infrastructures, organizational hierarchies, and standardized communication tactics. This orientation has important implications for prevention and law enforcement.

First, our model helps to make the communicative and motivational levers exploited by scammers explicit, anticipating, and allowing practitioners to develop targeted safeguards that reduce manipulation opportunities. Such safeguards could include technical solutions such as automated alerts on social platforms (e.g. warning users when added to a group promoting investments or providing caution about requests to move conversations to a

private messaging app), thereby reducing the burden on potential victims to detect manipulation themselves.

Moreover, our findings help to anticipate how these scams may evolve in the context of emerging technologies. INTERPOL has recently warned that AI is increasingly used to generate fake job ads that lure trafficking victims, create deepfakes for romance and sextortion scams, and automate aspects of social engineering [73]. The scam manuals we analysed already show how offenders are trained to adapt scripts, identities, and emotional cues to different cultural and gender contexts. AI integration is likely to further industrialize this personalization, enabling highly tailored, convincing interactions at scale. Here, psychological and communication theories underscore a clear risk where the same universal needs for connection, security, and autonomy that scammers currently exploit may be leveraged more efficiently through AI-driven profiling and content generation. However, our model offers a practical counterbalance by helping practitioners anticipate how AI could most likely intensify harm (e.g. scaling up emotional manipulation or automating personalized persuasion scripts).

Second, it underscores the need to invest in public education and awareness initiatives that address the psychological and communication strategies embedded in these scam manuals, particularly in light of their devastating financial consequences. According to recent statistics from the GASO, victims of the *Sha Zhu Pan* scam lose an average of \$155 117 per case [10]. Our model offers unique insights into how scammers are trained and operate, allowing practitioners to design educational interventions that reflect the sophisticated nature of these scams and empower individuals with the knowledge needed to recognize and resist these manipulative tactics. For instance, they could focus on demystifying scam processes in ways that mirror offenders' own training. One idea might be to use simulated conversations to show how scammers escalate from friendly rapport to financial solicitation, how scripts recycle phrases across different contexts, and are tailored to people coming from different cultural backgrounds and genders. Similar interactive modules have been trialed in phishing awareness [e.g. 74], where practicing recognition of scripted cues improved detection. Likewise, studies on other forms of financial fraud suggest that such interventions can reduce susceptibility [75].

Lastly and importantly, awareness programs of this kind can also play a vital social role by fostering empathy toward victims. Too often, those deceived by such scams feel stigmatized or blamed for their misfortune [76] as though being trusting or emotionally open were personal failings. Our model demonstrates that scammers exploit the very traits that make us human. Recognizing this helps shift the focus away from blaming individuals and toward collective understanding, emphasizing that prevention should not require people to suppress their humanity, but rather that society, institutions, and technology systems work together to protect humanity.

Limitations and future outlook

This study has limitations and opportunities for future research. First, the leaked scam manuals analysed in this study were written in Chinese, which means we had to rely on translation tools. While we tried to minimize any loss of meaning by consulting a native Chinese-speaking colleague, we may have lost some nuances during the translation process. Similar challenges have been

noted in studies relying on cross-linguistic data, where translation tools, despite expert input, can result in subtle losses in meaning or cultural context [77]. Future studies could address this limitation by incorporating professional translators or conducting cross-validation of translations within multilingual research teams. Second, a limitation inherent in the data set was the lack of information regarding the creation dates of the manuals. As a result, we were unable to examine how scammers' strategies and sophistication may have evolved over time, which could have provided additional insights into the development of their tactics. Evolutionary shifts in scam strategies, especially during pivotal moments such as global events, have been observed in other scam contexts, such as COVID-19 scam cases, where scammers adapted their tactics rapidly to exploit widespread vulnerabilities [78]. Future research could address this by ensuring that temporal data is included to explore how external factors influence the evolution of scam techniques.

Additionally, our dataset was predominantly composed of manuals tailored toward targeting Chinese victims. Expanding the scope to include a broader range of manuals could reveal cultural patterns and strategies that scammers use to better target victims from different cultural backgrounds. While this was not the primary objective of our study, we consider this an intriguing avenue for future research, as it could deepen our understanding of how cultural norms and values shape both scam tactics and victim susceptibility. For example, cultural perspectives might examine how scammers leverage cultural norms and values, such as honor or communal trust, to influence scam susceptibility, building on research that shows trust levels vary across cultures in scam contexts [79]. Further, the scam manuals analysed in this study offer a unique opportunity to understand how scammers profile their targets and tailor strategies to exploit specific vulnerabilities. These insights could help to cluster victim groups by risk factors, enabling the development of more targeted prevention strategies. In addition, as scammers increasingly adopt advanced tools such as AI and chatbots, future studies must investigate how these technologies enhance manipulative tactics and reshape the nature of organized cybercrime. Lastly, future research could test and refine the theoretical model proposed here by analysing victim–scammer chats, for example, to assess its relevance across a broader range of online scams, including those adapted for different cultural, technological, and economic contexts.

Conclusion

Sha Zhu Pan scams represent a rapidly growing form of online scam that exploits victims through romantic and financial manipulation. Though emerging studies describe their social engineering tactics, little is known about the psychological and communicative theories that underpin their effectiveness. To this end, we thoroughly examined 26 scam manuals to understand how scammers integrate psychological and communication theories to execute their schemes. The findings reveal that scammers systematically apply and interweave different groups of theories—namely interpersonal communication, interpersonal relationship, and motivation—to inform their strategies for building trust, intimacy, commitment, and dependency. Finally, the insights gained offer practical contributions for informing prevention strategies, such as awareness campaigns, and guiding future

interdisciplinary research to deepen understanding of and develop effective countermeasures against *Sha Zhu Pan* scams.

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Author contributions

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Supplementary material

Supplementary material is available at [Journal of Cybersecurity](#) online.

Conflicts of interest

None declared.

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