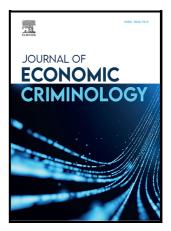# Journal Pre-proof

What Do We Know About Online Romance Fraud Studies? A Systematic Review of the Empirical Literature (2000 to 2021)

Suleman Lazarus, Jack M. Whittaker, Michael R. McGuire, Lucinda Platt

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What Do We Know About Online Romance Fraud Studies? A Systematic Review of the Empirical Literature (2000 to 2021)

LIST OF AUTHORS:
1. Dr. Suleman Lazarus[1],
2. Mr. Jack M. Whittaker[2],
3. Dr. Michael R. McGuire[3],
4. Professor Lucinda Platt[4]

AFFILIATIONS:

[1]FIRST AUTHOR: **Dr. Suleman Lazarus**

- Affiliation [1]: Mannheim Centre for Criminology, London School of Economics and Political Science (LSE), Houghton Street, London, WC2A 2AE, United Kingdom. Email: suleman.lazarus@gmail.com; S.lazarus@lse.ac.uk

- Affiliation [2]: Department of Sociology, University of Surrey, Stag Hill, University Campus, Guildford, GU2 7XH, United Kingdom. S.lazarus@surrey.ac.uk

[2] SECOND AUTHOR: **Mr. Jack M. Whittaker**

- Department of Sociology, University of Surrey, Stag Hill, University Campus, Guildford, GU2 7XH, United Kingdom. Email: j.m.whittaker@surrey.ac.uk

[3] THIRD AUTHOR: **Dr. Michael R. McGuire**

- Department of Sociology, University of Surrey, Stag Hill, University Campus, Guildford, GU2 7XH, United Kingdom. Email: m.mcguire@surrey.ac.uk

[4] FOURTH AUTHOR: **Professor Lucinda Platt**

- Department of Social Policy, London School of Economics and Political Science (LSE), Houghton Street, London, WC2A 2AE, United Kingdom. Email: l.platt@lse.ac.uk

Corresponding Author
Suleman Lazarus, Ph.D.
[a] Email Address: suleman.lazarus@gmail.com ; [b] Email address: S.lazarus@lse.ac.uk

Abstract

We aimed to identify the critical insights from empirical peer-reviewed studies on online romance fraud published between 2000 and 2021 through a systematic literature review using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol. The corpus of studies that met our inclusion criteria comprised twenty-six publication studies employing qualitative (n=13), quantitative (n=11), and mixed (n=2) research methods. Most studies focused on victims, with eight focusing on offenders and fewer investigating public perspectives. All the victim-focused studies relied on data from the Global North, except for one conducted in Malaysia. Five offender-focused studies used online data available in the public domain, and three derived their data from West Africa. Our review highlights offenders' techniques to deceive and manipulate victims, as revealed in these studies, and highlights some limitations of offender- and victim-focused studies. The dominant framework used across the studies was found to be the "Scammers Persuasive

Techniques Model." While this framework provides a helpful way of considering the stages of victim involvement, it also faces some limitations, which we highlight. We stress the importance of considering a greater range of regional and global viewpoints in understanding online romance fraud. Our study reviews the current state of empirical knowledge on romance fraud and identifies certain gaps and biases in the literature. We argue there is a need for further research into online romance fraud to enhance our understanding of it both from the perspective of the offender as well as the experience of the victim. We also highlight the need for a more inclusive and diverse range of data sources and perspectives. Given the scale and impact of online romance fraud, we conclude that its study would benefit from a richer empirical engagement and one that encompasses a regional and global phenomenon.

Keywords: romance fraud; romance scam; victims and offenders; online dating; persuasive scammers technique model; cyber intimacy

1. INTRODUCTION

I am lost and alone. "I have recently separated from my husband and, at 51, find myself in unfamiliar dating territory that bears no resemblance to the courting rituals of my twenties and thirties (Times, 2019).

The impacts of technology-mediated communication on social interaction have been widely felt, and perhaps nowhere so much as in our dating habits and preferences. Romantic connections are increasingly being forged within online contexts rather than through personal connections (Dibble & McDaniel, 2021; Kwok & Wescott, 2020; Wiederhold, 2020), with the value of the online dating market standing at approximately $7.5 billion in 2021 (Grand View Research, 2021). In 2020, approximately 23% of individuals residing in the United States reported engaging in a romantic encounter with an individual they initially met through a dating website or application (Pew Research Centre, 2020). Similarly, in the UK, 15% of citizens aged between 25 and 45 were estimated to be using online dating apps (Statista, 2021).

The shift towards online dating has stimulated attempts to exploit the public's changing habits for criminal economic gain. Romantic deception for financial gain notably pre-dates the internet, for example, in the case of the 16th century so-called 'Spanish prisoner scams' (Gillespie, 2017). The subsequent expansion of online dating from around the end of the late 20th century and the increasing sophistication in fraudulent applications of technology more generally have, however, hugely increased their potential reach and ease of implementation. However, online romance fraud is distinct from other types of online fraud because the perpetrator intentionally tries to create an emotional connection or sense of dependence between themselves and the victim (Lazarus, Button & Kapend, 2022). As such, 'online romance fraud' as this type of offense is known, involves a situation where;

> *…scammers …use the development of love affairs as a toolbox to lure their victims into offering money to them. For scammers, it does not matter if the owner of the money is a man or woman; scammers consider victims to be 'good clients' inasmuch as they can steal funds from them without much ado.* [Therefore] *romance scams can be defined as the deployment of fake romantic relationships primarily for material ends* (Lazarus, Button, & Kapend, 2022, p.387).

The material rewards from online romance fraud for offenders can be substantial and have grown significantly in recent years. According to the US Federal Trade Commission, the losses incurred in 2021 amounted to more than $547 million, over six times the amount lost in 2017 (Fletcher, 2022). Notably, this figure represents an almost 80% rise compared to the losses incurred in 2020 (Fletcher, 2022). However, despite these spiraling losses and the significant emotional and psychological damage to victims which can result, research into the practice has been somewhat limited, and we, therefore, lack a detailed understanding of this type of fraud. In particular, we lack a clear overview of the extent of research into online romance fraud that has taken place and its key insights. That is the aim of this article.

We have systematically reviewed literature from the past two decades to identify the state of current knowledge about online romance fraud. No review on the topic exists, except for Coluccia et al.'s (2020) work, which primarily delves into the epidemiological and pathological aspects of the subject matter, summarizing findings from a set of twelve studies. However, our focus and scope are different. We aim to sharpen the sociological eye on the topic through a systematic review. Systematic reviews go beyond traditional literature reviews to encompass systematic, structured, and explicitly described steps of gathering and analyzing relevant existing knowledge (Harris et al., 2014; Knobloch et al., 2011; Moher et al., 2009).

In scrutinizing the type of empirical data and sources behind claims about online romance fraud, we concur with Harris et al. (2014) in recognizing that the caliber of empirical studies used in a systematic review shapes the quality and strength of recommendations derived from it. We recognize that online fraud comes in many forms (Ibrahim, 2016; Junger et al. 2023; Whittaker & Button, 2020). In our article, however, we conduct a systematic review to determine the extent to which empirical research supports broad assertions about online romance fraud in particular. The overall aims of this review are twofold: to *better understand what existing empirical research into online romance fraud tells us*. For example, does it offer unambiguous findings on perpetration methods or offender and victim type? And second, to *analyze whether the online romance fraud literature shows any specific gaps or potential biases*. For example, does the existing literature engage with offending cultures from different parts of the globe and the specific features of romance fraud in key offending hubs such as West Africa?

2. METHOD

2.1. *Approach*

Systematic reviews play an essential role in social research. Not only can they help in synthesizing current knowledge in a given field, but they can also identify problems within primary research that better shapes how future studies are conducted. By bringing together the attempt to address multiple questions that may be hard to answer within individual studies, they can also assist in generating more developed theoretical frameworks, or highlight limitations in prevailing ones. Such reviews are not without their limitations, however, in that the process that makes them rigorous and transparent may in the process leave out valuable insights that fall out of scope. In order to make a systematic review useful for its audience, it must be carefully crafted to meet specific standards. For the review to be effective, the purpose must be stated clearly and accurately; how it was conducted (in particular, the eligibility inclusion

criteria for studies, how they were reviewed and selected, and the coverage limits); and a statement of what was found (Page et al., 2020).

Systematic reviews can be undermined by a lack of transparency in the selection methods and a failure to explain what the selected studies imply, including evaluating their quality and the import of their findings. To ensure the robustness of the review, this study drew upon the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Bedenlier et al., 2020; Knobloch et al., 2011; Moher et al., 2009; Page et al., 2020). An advantage of using PRISMA is that it provides an evidence-based set of recommendations for more effective reporting of systematic reviews. PRISMA consists of a 27-item checklist and a four-phase flow process centered upon the following stages (Bedenlier et al., 2020; Knobloch et al., 2011; Moher et al., 2009; Page et al., 2020):
- Identification
- Screening
- Eligibility
- Inclusion

Taken together, these are designed to ensure effective inclusion and exclusion criteria for the studies selected within any review.

The inclusion criteria for this review were fourfold, as shown in Table 1 below. First (IC1), we restricted our study to sources that were available online. This meant that any works not published in an online form were excluded. Second (IC2), we restricted the language of publication to English. Therefore, all works not published in English were excluded because the research team was not competent in other languages. Third (IC3), given the nature of the review, all the included studies had to be on original empirical research, either qualitative or quantitative. Fourth (IC4), while all empirical studies on online romance fraud included in this review were peer-reviewed publication outputs (e.g., book chapters and journal articles), we excluded dissertations and preprint papers. Fifth, we restricted our search to those published between 2000 and 2021 (IC5). Sixth, we also used quality criteria to assess the quality of the studies, e.g., to exclude studies published in predatory journals (IC6).

Table 1. Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Publications 2000-2021 (IC5)	Publications before 2000
Publications in English language (IC2)	Publications not in English language
Online Romance fraud-specific outputs, e.g., exemplified in their titles, keywords, abstracts (Not an IC)	Non-online romance fraud-specific outputs,
Peer-reviewed publications, e.g., journal article (IC4)	Non-peer-reviewed publications, e.g., preprint and dissertations
Publications in non-predatory journals (IC6)	Publications in predatory journals
Publications available online (IC1)	Publications unavailable online
Empirical research output except for preprints and dissertations (IC3)	Non-empirical research outputs, e.g., conceptual papers

We chose to restrict our review to the period 2000-2021 because this coincided with the advent and subsequent growth of widely commercialized dating sites and apps (e.g., Tinder) and with the internet boom in many parts of the world, particularly in clusters where online romance

frauds are often attributed to such as West Africa, Southeast Asia, and Eastern Europe. Though the broad concept of 'romance fraud,' 'fraud' or 'scams' in general precedes the advent of internet technology (Gillespie, 2017), articles that focus on terrestrial offending in the context of romance (e.g., defrauding a spouse) are beyond the scope of this study. Instead, the focus here is on the new (digital) means of forming relationships, which have inevitably increased the opportunties for offending by allowing fraudsters and their victims to interact more easily and across greater geographical distances, as well as making the subterfuges easier, e.g though profiles that bear no correspondence to the appearance, characteristics or even sex of the offender.

2.2   *Information sources & article selection*

Online romance fraud studies have been published in various forms (e.g., conference papers, journal articles, dissertations, books, and book chapters). Thus, we searched a range of sources such as Web of Science, Psych Info, IEEE Digital Library, SAGE, Wiley, and ScienceDirect, using commonly applied keywords relevant to online romance fraud that have been previously applied to the lexis of the fraud. For example, "romance scam," "sweetheart swindle," "romance fraud," "romance scammer," "dating scam," "love scam," and "romance fraudsters." The decision to include the word "romance," "love," "dating," or "sweetheart" was intentional to enable us to exclude studies on other forms of online scams or frauds. Although the terms scam and fraud are often used interchangeably in existing studies, we acknowledge that they should actually be treated as separate terms. In line with the argument that scams and frauds are distinct concepts, we will henceforth use the term "fraud" instead of "scam" unless explicitly citing another author's use of the term or the name of a specific theory. This strategy highlights the severity of criminal actions rather than risk trivializing them.

2.3 The *data collection process*

Two team members independently assessed the studies which met our inclusion criteria to extract the information relevant to our research aims. We first classified the studies according to their essential features – as outlined in Table 2 below. We then aimed to identify the study details that would enable us to draw conclusions about their findings and the state of research in this field (cf. (Bada & Nurse, 2021; Knobloch et al., 2011; Moher et al., 2009), as also presented in Table 2.

Table 2. Descriptive and In-depth classification of the studies

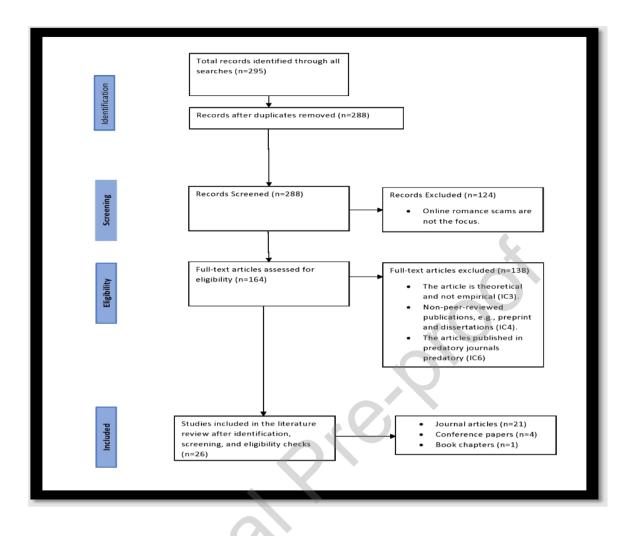| Levels	Variables

Classification of studies: key features	[a] Publication year. [b] Publication venue (e.g., name of conference or journal). [c] Methods or approaches (e.g., quantitative survey, qualitative interview, or mixed methods) [d] Respondents (e.g., victims, perpetrators, law enforcers). [e] Location of participants/study [f] Size of data (e.g., n=101). [g] Publication type (e.g., book chapter, conference paper, journal article). [h] Affiliations of authors, the geographical location of the affiliations
Identification of key findings from studies	[a] Favored theoretical perspective and limitations. [b] Themes from offender-focussed studies, motives for romance fraud and limitations [c] Themes from victim-focussed studies, and limitations [d] Financial and psychological impact. [e] The meaning and uniqueness of romance fraud perpetration methods and fraudsters' justifications.

3. RESULTS

3.1. Selection of articles

We initially found 295 publications from the following databases: Web of Science, Psych Info, IEEE Digital Library, SAGE, Wiley, Scholastica, and ScienceDirect. We eliminated duplicates, after which we were left with 288 articles. Based on the title, abstract, keywords, introduction, and conclusion, we then sought to remove any publications that were not, in fact, concerned with online romance fraud, which resulted in 124 articles being removed from the data (as shown in Figure 1).

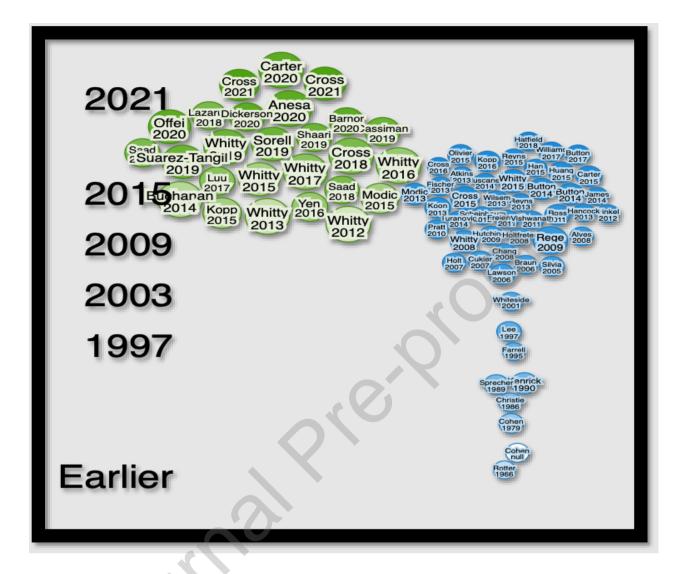**Figure 1: PRISMA Flow Chart of the Selection Process**

Based on the title and abstract, we then checked against our inclusion criteria to ensure that all four were satisfied. No publications were removed following the application of IC1 and IC2. However, a further 116 outputs were discarded after IC3 was applied based on the absence, presence, and content of the method section. IC3 warrants that all publication outputs included in this review were based on primary qualitative and quantitative data sets. In turn, we removed eighteen publications that did not meet IC4. After this process, we re-examined the data by closely reading the methods sections of the remaining publications. No publications were removed following this check. We also used quality criteria to exclude studies published in predatory journals. Upon closer examination, we discovered that four studies were published in a predatory journal and therefore did not meet the quality criteria (1C6), so they were excluded. As a result, twenty-six empirical studies were identified for inclusion in this systematic review.

3.2. Article Characteristics

Figure 2 displays empirical studies that examined online romance fraud published between 2012 and 2021. The green dots depict twenty-six empirical studies we included, while the blue dots represent the excluded ones. The arrangement of both green and blue dots in chronological order visually represents the timeline of the research conducted on this topic.

Figure 2: - Visual representation of studies.

2021

Carter 2020
Cross 2021
Cross 2021
Anesa 2020
Lazari 2018
Dickerson 2020
Barnor 2020
Cassiman 2019
Offei 2020
Shaari 2019
Hatfield 2018
Williams 2017
Button 2017
Saad
Suarez-Tangil 9
Whitty 9
Sorell 2019
Cross 2018
Whitty 2016
Olivier 2015
Kopp 2015
Reyns 2015
Cross 2016
Atkins 2013
Tuscane
Whitty 2015
Han 2015
Huang 2015
Carter 2015
Luu 2017
Whitty 2015
Whitty 2017
Saad 2018
Modic 2015
Fischer 2013
Whitty 2014
Button 2014
Button 2014
James 2014

2015

Buchanan 2014
Kopp 2015
Whitty 2013
Yen 2016
Whitty 2012
Koon 2013
Cross 2015
Wilsem 2013
Reyns 2013
Modic 2013
Scheinbaum 2013
Ross 2013
Hancock inkel 2012
Pratt 2010
Turanovic 01
Freien 2014
Vishwanath 2011
Hutchin 2009
Holtfrete 2008
Rege 2009
Alves 2008
Whitty 2008

2009

Holt 2007
Cukier 2007
Chang 2008
Lawson 2006
Braun 2006
Silvia 2005

2003

Whiteside 2001

1997

Lee 1997
Farrell 1995
Sprecher 1989
enrick 1990
Christie 1986
Cohen 1979
Cohen null
Rotter 1966

Earlier

Of the 26 publications identified, twenty-one were journal articles, one was a book chapter, and four were (peer-reviewed) conference papers. The 26 outputs involved 46 authors. One author, Whitty, appeared in nine of the twenty-six publications as co-author (five outputs) and sole author (four outputs). Two authors – Buchanan and Cross, were involved in three publications, co-authoring with others. Except for Abdullah and Saadi, who featured in two collaborative studies, the remaining authors featured in only one publication each, in four cases as sole authors. The authors' affiliations were based in seven countries, with some uneven locations – possibly partly due to our inclusion criteria, which only covered English language publications and favored those countries with online repositories. The affiliation of the authors was grouped as follows: United Kingdom (11), Australia (9), The United States (5), Malaysia (3), Italy (1), Belgium (1), and Ghana (1). It is important to note, though, that this analysis is based on the professional affiliations of the authors rather than their countries of origin. Consistent with this geographical bias, all bar one of the thirteen studies that focused on victims was based on information collected about countries in the Global North – the exception being Shaari et al.'s (2019) study of victims Jof fraud in Malaysia.

Half the studies drew on qualitative approaches (13 studies), with a smaller number of quantitative (11 studies) and mixed methods (2 studies) approaches. The nature of the data varied across the studies. Some studies relied on online data sources available in the public domain, namely fake dating profiles (Kopp et al., 2015), offenders' messages (Anesa, 2020), music lyrics (Lazarus, 2018), and suspected romance fraud adverts (Yen & Jakobsson, 2016). Another group of studies recruited participants directly for the research (e.g., Luu, Land & Chin, 2017). Interestingly and innovatively, one qualitative study was based on a single online romance fraud case (Carter, 2020). All but four studies (two qualitative and two quantitative) relied on different data sources. Two qualitative studies (Whitty, 2013; Whitty, 2016) used the same data, as did two quantitative studies (Saad et al., 2018a; 2018b). In this latter case, the two studies (i.e., Saad et al., 2018a; 2018b) were substantively similar, with one being a conference paper and the other being a journal article. However, we included both of them because the methods of analysis they used differed.

Among the fifteen studies focused on victims, the methods comprised eight qualitative, six quantitative, and one mixed method study. Eight studies focused on offenders (Anesa, 2020; Barnor et al., 2020; Cassiman, 2019; Yen & Jakobsson, 2016; Kopp et al., 2015; Lazarus, 2018; Offei et al., 2020; Suarez-Tangil et al., 2020). Of these, three studies conducted in Ghana involved interviews (Barnor et al., 2020), ethnographic work (Cassiman, 2019), and quantitative questionnaires (Offei et al., 2020). Five other offender studies used data available in the public domain (Anesa, 2020; Yen & Jakobsson, 2016; Kopp et al., 2015; Lazarus, 2018; Suarez-Tangil et al., 2020). The remaining three studies covered the general population, comprising two quantitative studies (Luu et al., 2017; Whitty, 2018) and one mixed-method study (Dickerson et al., 2020). Nineteen contributions were disseminated across nineteen distinct outlets. An additional three articles were featured in the "*British Journal of Criminology*" (Carter, 2020; Cross, Dragiewicz & Richards, 2018; Whitty, 2013). The four remaining articles were distributed evenly between two journals, namely "*Cyberpsychology, Behavior and Social Networking*" (Whitty, 2018; Whitty & Buchanan, 2012) and "*Security Journal*" (Whitty, 2015; Sorrel & Whitty, 2019), with an equal number of two articles in each journal. Again, our exclusion of non-English language articles will have shaped the outlets of the sample.

While some of the twenty-six online romance fraud studies anchored their work directly in theory, e.g., Barnor et al. (2020), not all did (e.g., Buchanan & Whitty, 2014; Kopp et al., 2015; Whitty, 2019; Sorell & Whitty, 2019). This suggests the lack of an effective "blueprint," which Grant & Osanloo (2014) have argued should be a measure of evaluation of studies. Of those studies which did offer a theoretical background, five victim-focused studies explicitly favored the scammers' persuasive technique theory (Cross et al., 2018; Shaari et al., 2019; Whitty, 2019), while two offender-focused studies drew upon the neutralization technique theory (Lazarus, 2018; Offei et al., 2020). One offender-focused study drew on neutralization techniques implicitly (Banor et al., 2020), and one drew implicitly on the scammers' persuasive technique theory (Anesa, 2019).

Table 2 provides the full publication details of all 26 works and summarises their key features: their approaches, their country focus, whether victim or offender studies and the country of affiliation of the author(s).

Table 2. Characteristics of the 26 empirical studies

Year	Title of Article	Type of Outlet	Name of Outlet	Methodological Approach	Data Source	Size of Data (n=)	Name of Authors	Affiliations of Authors	Geographical Affiliations	*Explicit and **Implicit Research Questions	Findings
2012	The Online Romance Scam: A Serious Cybercrime	Journal Article	Cyberpsychology, Behavior, and Social Networking	Quantitative	Victims	2028	Monica Whitty; Tom Buchanan	University of Leicester; University of Westminster	United Kingdom	**To learn about the prevalence of online romance scams in Great Britain, how widely the crime is known, and how individuals are learning about it.	This research provides some descriptive statistics about knowledge of romance scams and its victimisation in the UK. Despite, at the time of publication, the scam being relatively new the authors suggest that an estimated 230,000 British citizens may have

											fallen victim to this crime.
2013	THE SCAMMERS PERSUASIVE TECHNIQUES MODEL: Development of a Stage Model to Explain the Online Dating Romance Scam	Journal Article	British Journal of Criminology	Qualitative	Victims	20				*To examine the persuasive techniques that scammers employ and consider whether previous theories on persuasion are adequate in explaining why victims are conned by this particular fraud.	The author finds that the elaboration likelihood model needs to adequately explain the scam. The near-win phenomenon provides a useful explanation for why some individuals remain in the scam. In addition, the author develops a new model called the "Scammer Persuasive Technique Model" to
								Monica Whitty	University of Leicester	United Kingdom		

											understand how the scam progresses, which seeks to explain why individuals get sucked into the scam and the carefully orchestrated steps that offenders take to defraud their victims.
2014	The online dating romance scam: causes and consequences of victimhood	Journal Article	Psychology, Crime, & Law	Quantitative	Victims - Online daters, Victim Support website	Study 1 - 85; Study 2 - 397	Tom Buchanan; Monica Whitty	University of Westminster; University of Leicester	United Kingdom	*To examine why some individuals are willing to give up their personal savings for someone they have met online.	The work provides a novel insight into the characteristics and experiences of people affected by romance scams. A

											single psychological variable is associated with susceptibility to victimization in romance scams; the romantic belief of idealization. In addition, less emotionally stable males may be affected by fraud on an emotional level.
2015	The Role of Love stories in Romance Scams: A Qualitative Analysis of Fraudul	Journal Article	International Journal of Cyber Criminology	Qualitative	Offenders - Fake dating profiles	37	Christian Kopp; Robert Layton; Jim Sillitoe; Iqbal Gondal	Federation University	Australia	**To provide a qualitative analysis of fake online dating profiles	Fraudulent dating profiles are identified as following typical characteristics. The authors conclude

ent Profiles											that each profile analyzed in their study utilizes personal stories suited explicitly for the scam. They are typically detailed enough to "hook" the victim but leave enough ambiguity, which can be adapted in the "grooming" phase of the scam. As such, the authors suggest that once the scammer learns more about

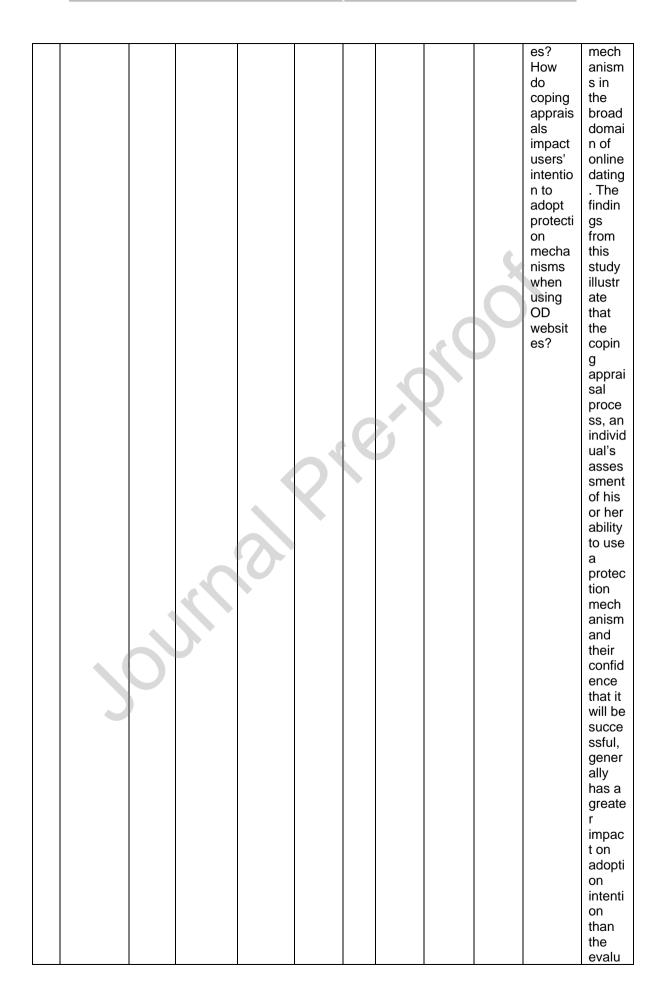| Year	Title	Type	Source	Method	Data	Study	Author	University	Country	Purpose	Summary
											the victim, the story presented in the profile can be replaced with a better-matching story.
2015	Anatomy of the online dating romance scam	Journal Article	Security Journal	Qualitative	Victims - Posts on a public website, victims of fraud, SOCA officer	Study 1 – 100 Study 2 - 20 Study 3 – 1	Monica Whitty	University of Leicester	United Kingdom	**To outline the anatomy of romance scams	The model presented in this paper outlines the anatomy of a typical romance scam that encompasses five distinctive phases. In the first stage, an offender creates an attractive dating profile. In the second stage, the

											offender grooms the victim in preparation for the third stage. In the third stage, the offender requests money from the victim. In stage four, victims are sexually humiliated by the offender. Lastly, in stage five, the victim realizes they have been scammed.
2015	The online dating romance scam: The psychological impact on	Journal Article	Criminology & Criminal Justice	Qualitative	Victims	20		Monica Whitty; Tom Buchanan	University of Leicester; University of West	United Kingdom	*To learn about the impact this crime has on individuals.	The authors find that "victims" of romance scams are not only

								minster			those that have lost money, but also those that have not lost money. The argument here is that both those had lost money and those that did not reported the same psychological impact. Furthermore, the authors find that in the case of those victims that did lose money, they experienced a "double hit" from both
victims – both financial and non-financial											

											the monetary loss amount lost and the psychological impact.
2015	It's All Over but the Crying: The Emotional and Financial Impact of Internet Fraud	Journal Article	IEEE Security & Privacy	Quantitative	Victim perspectives	6,609	David Modic; Ross Anderson	University of Cambridge	United Kingdom	*To examine the emotional costs of victims.	The authors find that romance scams, from a broad range of frauds, have the highest emotional impact for victims. The authors also identify that offenders utilising advance-fee fraud modalities also seek to build a trusted relationship with potent

											ial victims, making the inevitable betrayal similar to romance scams.
2016	Case Study: Romance Scams	Book chapter	Understanding Social Engineering Based Scams	Quantitative	Offenders - Suspected romance scam adverts	N/A	Markus Jakobsson	Agari	USA	**To describe romance scams and to perform an experiment to establish metrics around it	The authors, by using magnetic honeypot adverts posted to the Craigslist M4W category in the 100 "slowest" US cities, find that 58% of the responses received were traditional romance scams. They also find that affiliate

											marketing scams (20%) was a common type of scam in the responses to their advert. Lastly, the authors find that around 2% of the scammers will click on links in the authors responses, and that 5% will reply.
2017	Safeguarding Against Romance Scams – Using Protection Motivation Theory	Conference Proceedings	25th European Conference on Information Systems (ECIS)	Quantitative	Public	399	Veronica Luu; Lesley Land; Wynne Chin	University of New South Wales; University of Houston	Australia; USA	*How do threat appraisals impact users' intention to adopt protection mechanisms when using OD websit	The authors examined the factors and processes leading to adoption intention of protection

											es? How do coping appraisals impact users' intention to adopt protection mechanisms when using OD websites?	mechanisms in the broad domain of online dating. The findings from this study illustrate that the coping appraisal process, an individual's assessment of his or her ability to use a protection mechanism and their confidence that it will be successful, generally has a greater impact on adoption intention than the evalu

											ation of the threat. Attitude, the author's identify, was deemed to be a considerable influencer of adoption intervention, functioning as a mediator.
2018	Do You Love Me? Psychological Characteristics of Romance Scam Victims	Journal Article	Cyberpsychology, Behavior, and Social Networking	Quantitative	**Victim perspectives**	11,780	Monica Whitty	University of Melbourne	Australia	**To report the psychological characteristics of romance scam victims	This study examined whether individual characteristics could predict whether somebody can become a romance scam victim by comparing victims with non-victim

										s. The hypotheses was tested using standard forced entry binary logistic regression, with victimisation being the outcome variable. The author concludes that the model introduced in the study was statistically significant in predicting victimisation. Two of the findings, however, were in the opposite direction to what was

											predicted.
2018	Cyber Romance Scam Victimization Analysis using Routine Activity Theory Versus Apriori Algorithm	Journal Article	(IJACSA) International Journal of Advanced Computer Science and Applications,	Quantitative	Victims	280	Mohd Ezri Saad; Siti Norul Huda Sheikh Abdullah; Mohd Zamri Murah	Royal Malaysia Police; Center for Cyber Security Faculty of Information Science and Technology Bangi	Malaysia	*Is age influencing the tendency to become a victim of cyber romance crime? Is education level influencing the tendency to become a victim of cyber romance crime? Is marital status influencing the tendency to become a victim of cyber romance crime? Is monthly income influencing the tendency to becom	This study finds that those Malaysians in the study aged between 25 and 45 were more likely to become romance scam victims. Furthermore, the authors find that most victims were educated, having either a degree or diploma and that both single and married people can become a romance

											e a victim of cyber romance crime? Is levels of cybercrime awareness influencing the tendency to become a victim of cyber romance crime?	scam victim. In addition, participants in employment and those considered to lack computer skills online fraud awareness were found to be more susceptible to romance fraud victimisation. Lastly, the authors argue that their study confirms the fundamental principle of RAT theory and its application to cyber

											crime research.
				Qualitative						**To illustrate the techniques that offenders use to ensure victim compliance with their ongoing demands for money	Using Tolman et al's (2009) typology of psychological mistreatment, the authors find evidence of eight of the nine types of abuse within romance fraud victims' narratives. Victims within the authors sample reported economic abuse, isolation, monopolisation, degradation, psychological
2018	Understanding romance fraud: Insights from domestic violence research	Journal Article	British Journal of Criminology		Victims	21	Cassandra Cross; Molly Dragiewicz; Kelly Richards	Queensland University of Technology	Australia		

											destabilisation, emotional or interpersonal withdrawal, and contingent expressions of love. As such, by looking at romance fraud through the lens of psychological mistreatment, they demonstrate that there is an overlap between domestic violence and romance fraud in terms of the types of psychologic

											al mistreatment.
			Quantitative							**To investigate the tendency factors that influence a victim's susceptibility to romance fraud victimization	This study finds that those Malaysians in the study aged between 25 and 45 were more likely to become romance scam victims. Furthermore, the authors find that the majority of victims were educated, having either a degree or diploma and that both single and married people can
2018	Victimization Analysis Based On Routine Activitiy Theory for Cyber-Love Scam in Malaysia	Conference Proceedings	PROCEEDINGS OF THE 2018 CYBER RESILIENCE CONFERENCE (CRC)		Victims	280	Mohd Ezri Saad; Siti Norul Huda Sheikh Abdullah	Royal Malaysia Police	Malaysia		

											become a romance scam victim. In addition, participants in employment and those considered to lack computer skills online fraud awareness were found to be more susceptible to romance fraud victimisation. Lastly, the authors argue that their study confirms the fundamental principle of RAT theory and its

												application to cyber crime research.[1]
2018	Birds of a Feather Flock Together: The Nigerian Cyber Fraudsters (Yahoo Boys) and Hip Hop Artists	Journal Article	Criminology, Criminal Justice, Law & Society	Qualitative		Offenders - Music lyrics in Public domain	18	Suleman Lazarus	Independent Researcher	United Kingdom	*What are the ethics of Nigerian cyber-criminals as expressed by music artists? Which techniques do artists deploy to describe their views on cyber-criminals? What might the justifications say about the motives for "cyber crime"?	The author finds that cyber criminals embody a powerful range of psychological mechanisms for disengaging moral control. Furthermore, the author argues that the oratory messages of hip-hop songs that legitimise the activities of cyber criminals may attract

[1] The authors utilise the same data and replicate the findings from their previous study, "Cyber Romance Scam Victimization Analysis using Routine Activity Theory Versus Apriori Algorithm".

											more followers that questioners, especially in the case of young people, thereby glamourising and normalising offending behaviour.
2019	Online romance scams and victimhood	Journal Article	Security Journal	Qualitative	Victims	20				*Do victims actually share responsibility with the scammer for their losses?	This study argues that romance scam victims are more responsible for their losses the more that they ignore available counter-evidence regarding the legitimacy of the person they percei
							Tom Sorrell; Monica Whitty	University of Warwick; University of Melbourne	United Kingdom; Australia		

											ve themselves as having a relationship with online. Specifically, those that have been scammed a multiple of times or victims of long-term scams may not recognise all of the counter-evidence for what it is, because of the grooming process involved in the scam or through an addiction they develop

											with being the at the centre of intense romantic attention. Lastly, certain personality types, particularly those with antecedent loneliness and shyness, may not approach online dating profiles sceptically and instead often succumb to intense romantic communication.
2 0 1 9	Online-dating romance scam in Malaysi a	Jour nal Arti cle	GEMA Online ® Journal of Langu	Qualit ative	Victi ms	60	Azia nura Hani Shaa ri; Moh	Univ ersiti Keba ngsa an	Mala ysia	*To investi gate the persua sive langua	The author s identi fy some comm

a: An analysis of online conversations between scammers and victims		age Studies					ammad Rahim Kamaluddin; Wan Fariza Paizi; Masnizah Mohd	Malaysia		ge strategies used as a modus operandi in the online dating romance scam.	on steps and persuasive language techniques used in romance scams, that positive politeness strategies are employed by the offenders initially which is later followed by negative acts towards the end of the relationship when the victims have either come to their senses or decided to end the relationship.

											The authors find that in the case of Malaysian victims the scammers adapted by using local names for people and places, that although apprehended suspects hold international passports they typically use a Malaysian partner to act in an official capacity, and that finally the use of Muslim names and religious

Year	Title	Type	Journal	Methodology		Sample	Author	University	Country		
											phrases is a common strategy in romance scams targeting Malaysians.
				Quantitative						*Those who score high on the Romantic Beliefs Scale will be less accurate at detecting fake from genuine profiles. Those who score high on a measure of impulsivity will be less accurate at detecting fake from genuine profiles. Those who score low on	The author finds that personality and behaviour predict accuracy in the human detection of romance fraud. Furthermore, belief systems and pre-dispositions can to some extent make them vulnerable to a romance fraud. Participant respo
2019	Who can spot an online romance scam?	Journal Article	Journal of Financial Crime		Public	261	Monica Whitty	University of Melbourne	Australia		

											Consideration of Future Consequences will be less accurate at detecting fake from genuine profiles. Those who had not spotted a scam will be less accurate at detecting fake from genuine profiles. Those who have a shorter response time will be less accurate at detecting fake from genuine profiles.	nse times in completing the task was, however, found to be the strongest unique contributor as those that took longer were more likely to distinguish fraudulent profiles from genuine ones. Lastly, those participants that claimed to have spotted a scam prior to the study had better accuracy scores.

				Qualitative						**To understand the connections between online and offline relationships in 'Zongos' in Ghana. To then explore the relationships that young men and women that inhabit these Zongos to understand how they disrupt the existing gender categories and features of marriage, gender roles and relations within Zongo communities. Lastly, to	The author finds that the line between what is considered an acceptable or unacceptable trick is very thin. Secondly, the interviewees do not fear an increased control and surveillance of their activities because they are already "out there". Lastly, the article finds that trickery can also generate what
2019	Spiders on the world wide web: Cyber trickery and gender fraud among youth in an Accra Zongo. *Social Anthropology*, *27*(3), 486-500.	Journal Article	*Social Anthropology*		Offenders	N/A	Ann Cassiman,	University of Leuven	Belgium		

										show how the economy of desire leads to the "frauding" of gender and race relations.	the author defines as "creative cultural moments", that former colonial relations can subsequently be turned upside down in fraud.
2020	Lovextortion: Persuasion strategies in romance cybercrime	Journal Article	Discourse, Context & Media	Qualitative	Offenders (messages)	49	Patrizia Anesa	University of Bergamo	Italy	*What types of persuasion strategies are employed in online romance scams (ORSs)? How do they differ from other forms of scams? What discursive/linguistic practices can be identified to define models of ORSs?	The author finds that romance scam messages follow similar structural patterns that include processes which aim to arouse interest and build trust which subsequently

											leads to lapses in the target recipients' judgements. The messages analysed in the study were found to project an ideal persona which embodies the desires of the recipient. Furthermore, the messages were found to groom the recipient into an emotional dependency on the offender.
2020	Rationalizing Online Romanc	Conference Proc	AMCIS 2020 PROC	Qualitative	Offenders (Inte	10	Jonathan Nii Barn	University of	Ghana	**To understand the trigger	The authors find an interpl

e Fraud: In the Eyes of the Offender	eedings	EEDINGS		rviews)		or Barnor; Richard Boateng; Emmanuel Awuni Kolog; Anthony Afful-Dadzie	Ghana		s of online romance fraudsters' behaviours	ay of various socioeconomic factors behind the commission of romance fraud from the offenders perspective including: peer recruitment and training, poverty, unemployment, low level of education and low income. Secondly, the authors identify that offenders will depend on affordable and availa

											ble technologies and network services. The authors also find that a lack of confidence in law enforcement provides ample opportunity for offenders to commit romance fraud. Offenders are found to possess basic computer and social skills which helps them in committing romance fraud. Lastly, offenders find

Journal Pre-proof

												justifications to make sense of their actions.
				Qualitative							**To understand the grooming strategies used in romance fraud.	The author finds that in contrast to the narrative that victims fall for romance scams because of over-romantic ideations, victims may also employ poor decision-making practices because of the skill of the offender. Underpinning this research is the argument that in
2020	Distort, extort, deceive and exploit: exploring the inner workings of a romance fraud	Journal Article	British Journal of Criminology			Victims	1	Elisabeth Carter	University of Roehampton	United Kingdom		

Year	Title	Type	Source	Method	Sample	Number	Authors	Affiliation	Country	Objective	Findings
											the context of romance fraud, responsive techniques that focus on protection and preservation can be used to mask financial requests that may otherwise appear alarming.
2020	Automatically Dismantling Online Dating Fraud	Journal Article	IEEE Transactions on Information Forensics and Security	Quantitative	Offenders (fake dating profiles) and random sample of public dating profiles	20,122	Guillermo Suarez-Tangil; Matthew Edwards; Claudia Peersman; Gianluca Stringhini; Awa	King's College London; University of Bristol; Boston University; UNSW Canberra	United Kingdom; USA; Australia	**To understand the distinctions between scammer profiles and those of regular users on dating platforms. To design three independent classifi	The authors present a system for detecting fraudulent dating profiles. The uniqueness of their system is that it relies on a wide range

							is Rashid; Monica Whitty			cation modules which analyse different aspects of public dating profiles. Lastly, to synthesise the classifiers into an ensemble classification system.	of features that are difficult to evade, such as the text in the profiles as opposed to IP addresses which forum moderators typically check. The authors acknowledge that this system, however, is not full proof. Their supposition is that scammers could circumnavigate the system by cloning the profiles of legitimate dating

										users from different websit es.
			Quant itative						*How does neutrali zation influen ce the intentio n to commit online roman ce fraud? how does denial of risk percep tion interact with the effect of neutrali zation on the intentio n to commit online roman ce fraud?	The study finds that a denial of victim effect is used by offend ers to justify their intenti on to defrau d. It also finds that offend ers realis e it is difficul t to justify that they can claim no respo nsibilit y and injury becau se the victim could demo nstrat e, where neces sary, monet ary and psych ologic al
2 0 2 0	How Do Individu als Justify and Rational ize their Crimina l Behavio rs in Online Romanc e Fraud?	Jour nal Arti cle	Inform ation System Frontie rs		Offe nder s ("ind ividu als with kno wled ge abou t onlin e roma nce fraud .")	Mart in Offei ; Fran cis K. And oh- Baid oo; Em man uel Wus uhon Yani bo Aya buri; Davi d Asa moa h	Univ ersity of Texa s Rio Gran de Valle y	32 0		

											losses and that the offender was responsible.
2020	Contextualised Cyber Security Awareness Approach for Online Romance Fraud	Conference Proceedings	7th International Conference on Behavioural and Social Computing (BESC)	Mixed Methods	Public	12	Sara Dickerson; Edward Apeh; Gail Ollis	Bournemouth University	United Kingdom	**To increase user awareness and provide real-time intervention on romance fraud inside of a dating platform.	The authors primary finding is that if advice about a potential romance fraud is given when a user starts their dating process online, it would in-turn benefit the users of dating platforms by reducing the likelihood for fraud to take place. When prompted, 100%

											of the experimental group stated that they read additional security information available on the dating platform. In the case of the control group, however, 0% viewed other security information. The authors also find that 100% of the respondents from the experimental group claimed to have learnt new information about

											romance fraud through an awareness message that was sent to them before they filled the questionnaire in.
2021	The Use of Military Profiles in Romance Fraud Schemes	Journal Article	Victims & Offenders	Mixed Methods	Victims	2,478	Cassandra Cross; Thomas Holt	Queensland University of Technology; Michigan State University	Australia; USA	**To examine the ways in which a military narrative is employed in romance fraud	The authors find that whilst gender was non-significant in who falls for the military modality used by romance fraudsters, there is instead a consistent relationship between loss of banking detail

											s and the risk of victimisation. A second finding is that victims who fall into low-income brackets are more likely to experience military romance fraud modalities and report economic loss.
2021	"I Suspect That the Pictures Are Stolen": Romance Fraud, Identity Crime, and Responding to Suspicions of Inauthentic	Journal Article	Social Science Computer Review	Qualitative	Victims	2,671	Cassandra Cross; Rebecca Layt	Queensland University of Technology	Australia	*What actions do individuals take in response to suspicions of inauthentic identities? How can this knowledge be used to improv	This article finds that complainants predominantly used an internet search to explore their suspicions, with many

| | Identities | | | | | | | | | | e future prevention messaging? | in addition also electing to conduct a reverse image search. The results in this study demonstrate the potential effectiveness in this strategy. Secondly, the results also demonstrated the use of fraudulent websites as evidence to support the inauthenticity of a profile. Whilst this was deemed as positive for the complainant |

											s, a negative consequence of this was the linking of innocent third parties (who's identities had been used by offenders in their websites) via digital footprints to fraud through no fault of their own.

3.3 Findings and Discussion

We now turn to our research questions and address what the studies told us about online romance fraud and gaps in the literature. We discuss insights from offender and victim-oriented studies in turn.

3.3.1. Offender-focused studies mostly cast their gaze on West Africa.

a. Targeting Westerners

Studies on offenders indicate that cybercriminals often target wealthy Westerners seeking romantic relationships (Barnor et al., 2020; Cassiman, 2019). The studies suggest that cybercriminals trivialize the financial loss of victims because they believe the developed

societies where the victim lives generally offer safety nets for them, such as social welfare and benefits. This applies to all online fraud victims, not just those who fall victim to online romance fraud. It is a part of the offenders' strategy. Offenders involved in online romance fraud also often participate in various other forms of fraud, such as Advance Fee Fraud (Barnor et al., 2020; Lazarus, 2018), suggesting that the boundaries between the two are not rigid.

Even though, from the cybercriminals' perspectives, Advance Fee Fraud is similar to online romance fraud in terms of its financial returns, romance fraud's effect on victims may differ. Romance fraud involves a level of emotional and sexual connection that is not typically present in other types of fraud and requires, therefore, a greater direct impact on victims, which offenders attempt to diminish. Similarly, those who commit romance fraud are belittling the pain of their victims. This type of fraud involves a deep emotional and sexual connection that is not usually seen in other forms of fraud.

While these studies provide a glimpse into the complex and multi-faceted nature of online romance fraud recognizing the interconnected nature of romance and other cyber crimes is clearly essential to developing effective strategies to combat them. Offenders minimize the impact on victims by downplaying the financial loss suffered by victims and citing the existence of safety nets in developed societies, such as benefits. But this neglects and trivializes the psychological suffering of victims, which they experience in addition to the financial penalties. The emotional harm is thereby more easily ignored by perpetrators.

b. Both men and women are offenders.

Despite common assumptions that men predominantly perpetrate online romance fraud, recent literature highlights the significant involvement of women in the perpetration of online romance fraud. In general, studies on online fraudsters tend to portray men as the main culprits (Lazarus, Button & Adogame, 2022; Lazarus & Okolorie, 2019). However, research on online romance fraud offenders has revealed that women play an active role in the scamming industry (e.g., Cassiman in 2019). Women engage in online romance fraud seeking direct and profitable online contacts without relying on men for mentorship and support. This suggests that women play central roles in the online romance fraud industry, challenging traditional gender roles and stereotypes. This trend also supports Rush and Monks et al.'s (2017) notion that women in West Africa specifically, which is where studies on offenders primarily identify romance fraud as originating, are increasingly taking on previously male-dominated career paths in general. Thus, the role of gender and the implications of the perpetrators' sex for online romance fraud requires further exploration and should not be overlooked in future research.

c. Gendered Values and societal acceptance

Women who are online romance fraudsters are less socially accepted than men who perform the same activities (Cassiman, 2019). Many people in West African communities see them as

transgressing gendered values and appropriate masculine virtues of trickery and disobedience. Society often associates masculinity with assertiveness and cunning, making it more acceptable for men to perpetuate fraud (Cassiman, 2019; Lazarus, 2018). Conversely, femininity is often associated with nurturing and caring, which makes it less acceptable for women to participate in activities such as online romance fraud. According to Rush et al. (2018), Nigeria and Ghana remain patriarchal societies with rigid views on women's gender roles, despite some changes in recent years. It is important to conduct further research to understand better the gender cultures and expectations of women who engage in online romance fraud.

d.   The glamorization and Social Legitimacy of Cybercrime

The glamorization of wealth plays a significant role in normalizing and legitimizing online romance fraud in West Africa. Fraudsters use displays of wealth, such as luxury cars and houses, to entice and recruit individuals in their local communities who view their wealth with envy and admiration. Rather than being condemned, fraudsters are often seen as resourceful and intelligent, further perpetuating the social legitimacy of their criminal activities (Cassiman, 2019; Lazarus, 2018). Studies within the broader field of online fraud (Lazarus, Button & Adogame, 2022; Ibrahim, 2017) and specific to romance fraud (e.g., Cassiman, 2019) provide evidence supporting the social legitimacy thesis of cybercrime in West Africa. Recognizing the impact of glamorization and social legitimacy in cybercrime is crucial for identifying and preventing online romance fraud, particularly among vulnerable populations susceptible to such allurements.

e.   Advantageous comparison

Online romance fraudsters often justify their actions by comparing themselves to other criminals, claiming their crimes are less dangerous than traditional crimes like robbery, rape, or murder (Bangor et al., 2019; Lazarus, 2018). They argue that they should not be called criminals and even question whether people who download movies from pirate sites are considered cybercriminals. This defense mechanism helps fraudsters justify their actions and reduce their feelings of guilt or shame. It also serves as a way to manipulate their victims into thinking that the harm caused by online romance fraud is minimal and, therefore, justifiable. It is important to understand these tactics to be able to detect and stop online romance fraud, especially for those who are especially vulnerable.

f.   Seductive images and gender swapping:

Fraudsters in online romance fraud often use seductive photographs, either of themselves or from the internet, to attract potential victims on dating sites (Cassiman, 2019; Yen & Jakobsson, 2016). The virtual world allows them to create fake online profiles and pretend to be someone they are not. The fluidity of the virtual world also enables them to swap genders in their fake online profiles, making it easier to target a broader range of potential victims and

avoid detection. This tactic is particularly effective in online romance fraud, where emotional manipulation plays a significant role. Using seductive images and gender-swapping techniques, fraudsters can create the illusion of a romantic relationship with their victims and gain their trust more quickly. This, in turn, makes it more likely that victims will be willing to send money or provide other forms of financial assistance to their supposed 'partner'.

g. Tailored Tactics of Fraudsters

Sophisticated online romance fraudsters employ tactics to customize their messages to suit the characteristics and location of their potential victims (Yen & Jakobsson, 2016). They often acquire pre-written scripts for romance fraud from underground forums that are categorized based on the age, ethnicity, and gender of the targets. Unlike other types of fraud, online romance fraud does not rely on a standard script, making it more challenging to detect using traditional storyline-based filtering techniques (Yen & Jakobsson, 2016). Detecting and filtering this type of fraud requires a different approach since fraudsters tailor their pre-written messages to their victims' characteristics. Therefore, relying solely on storyline-based filtering is insufficient to identify and prevent online romance fraud.

h. Colonial legacies:

A grasp of colonial legacies is necessary for understanding the contemporary manifestation of online offending, in general, and in West Africa specifically (Lazarus & Button, 2022a; Lazarus & Button, 2022b). Online romance fraud studies highlight that the colonial legacy of extracting resources from the colonies and exploiting local people led some offenders to see defrauding Westerners as a justifiable business (Cassiman, 2019; Offei et al., 2020; Barnor et al., 2020). The perpetrators, predominantly hailing from Africa south of the Sahara, believe that deceiving individuals from Western nations is a form of retribution for the suffering inflicted upon their forebears by Westerners during the epoch of the transatlantic slave trade. This era marked the initial extensive foray of the West into Africa south of the Sahara, leading to the subsequent expropriation and depletion of both human and natural resources. Hence, in some West African countries, online romance fraud is considered a civic virtue due to colonial legacies. In many cases, online romance fraudsters are respected members of their communities and enjoy a venerated status as skilled tricksters (e.g., Cassiman, 2019; Offei et al., 2020).

i. Skin color and 'race.'

Fraudsters often present themselves as white individuals, likely due to a preference for lighter skin color among potential victims, which is viewed as a core criterion of desirability (Suarez-Tangil et al., 2020). The preference for lighter skin color may reflect a hierarchy of desirability on specific dating sites, where skin color can be a prerequisite for accepting relationship requests. Thus, a distinctive feature of online romance fraud is that fraudsters do not impersonate individuals from West Africa or other regions but situate themselves in predominantly white Western nations and adopt light-skinned profiles.

j. Blaming and dehumanizing victims

Offenders use multiple neutralization techniques in online romance fraud. For example, offenders often blame victims for their own suffering, with the term "greedy" used to describe them. By doing so, fraudsters deflect their own guilt for their fraudulent actions and are therefore able to rationalize their actions (Barnor et al., 2020; Offei et al., 2020). Online romance fraudsters also dehumanize their victims, often using derogatory names (Lazarus, 2018). For instance, perpetrators often use terminologies such as "games" to refer to their criminal activities, "hunters" to describe themselves, and "game animals" to refer to their victims in a dehumanizing manner (Lazarus, 2018, p.70). The leading cause of this dehumanization is not the distance networked computers create between victims and offenders but the necessity for objectification so that offenders see their victims as foolish and equate them to mindless objects. Indeed, tricksters or fraudsters often believe that their victims have poor mental faculties and compare them to unwise subhumans. They view their victims as unintelligent people who are slow mentally to identify fraudulent relationships (Cassiman, 2019; Lazarus, 2018).

It is noteworthy that while offender-focused research into online romance fraud is very much emergent, it remains somewhat fragmented and lacks theoretical consistency. To illustrate this, out of the eight offender-focused studies identified, three favored a framework deriving from neutralization/rationalization techniques (Barnor et al., 2020; Lazarus, 2018; Offei et al., 2020), three did not explicitly employ any theory (Cassiman, 2019; Jakobsoon, 2016; Saurez-Tangil et al., 2020), and two used the "Scammers Persuasive Techniques Model," (Anesa, 2020; Kopp et al., 2015), as many victim-focussed studies do.

3.3.2. Victim-focused studies mostly cast their gaze on the West.

3.3.2.1. "Scammers Persuasive Techniques Model"

The "Scammers Persuasive Techniques Model" is the most widely utilized theory in the study of online romance fraud. This theory has been utilized across three categories of studies: offender-focused (e.g., Anesa, 2020), public-focused (e.g., Whitty, 2019), and victim-focused (e.g., Cross et al., 2018). Since the model is most commonly used in victim-based studies and is widely used among them, it is discussed here.

Whitty and Buchanan's research on romance fraud and the techniques offenders use to defraud victims has been the most influential to date (e.g., Buchanan & Whitty, 2013; Whitty, 2013a & 2013b). Their research involved three phases. First, they carred out an online survey with 796 participants from a dating website and 397 from a support site for fraud victims. Second, they investigated 200 reports from victims on a social support group; and third, they conduced face-to-face interviews with 20 victims.

Whitty identified seven stages of online romance fraud based on these studies.[2] The stages, are (1) the victim's motivation to seek an ideal partner, (2) the presentation of an ideal profile to victims, (3) the grooming process, (4) the sting, (5) the continuation of the scam, (6) sexual abuse, and (7) re-victimization. Together, these stages form the 'scammers persuasive techniques' model. This leads to identifying the three key scammers' techniques: the 'foot-in-the-door,' 'door-in-the-face' and sexual image-based abuse techniques.

The 'foot-in-the-door' involves initially asking for a small sum and then escalating crises requiring more extensive sums after gaining the victim's trust. The 'face-in-the-door' involves asking for an extreme sum of money initially. After the initial request, the victim is asked for less money to convince them to give away their funds. After the grooming phase, the perpetrator usually creates a crisis phase. This entails them purposefully inventing false information, such as the victim losing their parents, needing travel papers, or having a loved one in the hospital and being asked to pay money. One additional strategy offenders employ involves acquiring sexually explicit webcam recordings of the target individual through the pretext of a romantic affiliation. Subsequently, the perpetrator employs this tactic to extort money from the target (i.e., image-based sexual abuse).

The scammers' persuasive techniques model tends to suggest that the risks associated with online romance fraud are more pronounced for particular groups (Whitty, 2013a; 2013b). However, while everyone is potentially vulnerable, insights from privacy and security risk advice remind us that vulnerability is indeed a complex and dynamic concept (e.g., Boyd et al., 2021). Individuals or groups can experience varying levels of vulnerability that can change over time (Boyd et al., 2021; Smith, 2021). Despite its value in providing a streamlined account of the stages through which the fraud progresses in online romance form, the model nevertheless faces some limitations.

3.3.2.2 Theoretical Limitations and Implications of "Scammers Persuasive Techniques Model"

a. **Advance Fee Fraud**

While Nigerian 419 fraud or Advance Fee Fraud predates the "Scammers Persuasive Techniques Model," Whitty's model bears many similarities to Nigerian 419 fraud or Advance Fee Fraud. Advance Fee Fraud is a fraudulent scheme in which individuals are deceived into providing nominal sums of money for a significantly greater financial benefit (Adogame, 2009; Oriola, 2005). The Advance Fee Fraud, commonly known as 419, is historically associated with fraudulent activities originating from Nigeria (Lazarus & Okolorie, 2019). The origin of the term "419" can be traced back to the Nigerian Criminal Code's section 419, which pertains to fraudulent activities. Based on these insights, it is

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[2] It is worth noting that Whitty (2013a) originally proposed a five-stage model for romance fraud, which was later expanded to seven stages by Whitty (2013b) through the analysis of interviews conducted with 20 victims of romance fraud.

logical that the historical backdrop to the "Scammers Persuasive Techniques Model" in online romance fraud is indeed the Advance Fee Fraud or Nigerian 419 fraud in West African cybercrime literature. While there is some acknowledgment of the connection in Whitty (2013a), the relevance of Advance Fee Fraud and Nigerian 419 fraud and the legacy and contribution of the scholars mostly of West African descent (Ampratwum, 2009; Ebbe, 1997; Igwe, 2007; Oriola, 2005) who have investigated it could have been acknowledged. Neglecting Advance Fee Fraud literature in the dominant online romance fraud theory reprises the exclusion of West African scholars, such as Igwe (2007), Adogame (2009), Ampratwum (2009), Apter (1999), Ebbe (1997), and Oriola (2005), from discussions of online fraud, as noted by Lazarus (2020) and Cross (2018).

While, as we note, our selection criteria limited the scope of the review in ways that might have reduced coverage of work from non-English speaking scholars and countries without online repositories, in general, criminology has paid limited attention to scholars writing on these topics from formerly colonized African nations (Kalunta-Crumpton & Agozino, 2004) due to historical and colonial forces that tend to value the West's contributions over those of West Africa and the Global South (Cohen, 1988; Ibrahim, 2015; Lazarus, 2020). *If West African Scholars' works had been acknowledged, what changes or modifications would have been made to the "Scammers Persuasive Techniques Model"*?

The insights derived from the Nigerian 419 fraud format hold significance in the examination of online romance fraud, as they provide a valuable understanding of the motivations of fraudsters, including the dehumanization techniques they employ (Igwe, 2007). Incorporating these insights into Whitty's model would potentially enrich the theoretical framework by shedding light on the operational aspects and reception of fraud, leading to a more comprehensive understanding. Additionally, this integration could enhance Whitty's comprehension of the effective strategies employed by con artists and enable a better appreciation of the challenges faced by victims, thereby facilitating the development of more suitable support mechanisms.

It is crucial to clarify that the centrality of the work of West African scholars in our argument is based on the similarities between the long-standing Nigerian 419 fraud format and Whitty's model. This emphasis is not grounded in the assumption that Nigeria has a higher prevalence of online romance fraud perpetrators than other nations worldwide, such as Malaysia and Bulgaria. Instead, it underscores the "Scammers Persuasive Techniques Model" has all the hallmarks of the Nigerian 419 fraud thesis, and scholarly works that underpinned the Nigerian 419 fraud or Advance Fee Fraud were neglected.

b. **Moving beyond psychological accounts**

The focus on the experience of victims means that the model is individualized and does not, therefore, pay attention to the drivers of fraudulent behavior and the wider contexts in which they arise. Therefore, it tends to identify psychological drivers of responsiveness to fraud from the information provided by the victims. It would be beneficial to extend our

understanding of victimization beyond the psychological literature to consider the broader societal and systemic factors enabling and supporting fraudulent behavior.

a. **Limited scope**

The "scammers persuasive technique theory" focuses on scammers' techniques to manipulate their victims as experienced by the victims studied. However, this victim-focused approach does not comprehensively address the underlying factors contributing to fraudulent behavior. Also, the theory provides a general overview of standard techniques fraudsters use. At the same time, a number of these techniques might be employed beyond online contexts, given that offline and online are intertwined in online romance frauds. Whitty (2013a & 2013b) used many examples to illustrate the stages; however, the model could have benefitted from more contextual examples, and case studies focused on the practical aspects of fraud. To truly comprehend online romance fraud, having the theory informed by a richer array of real-life examples would have been beneficial. Having addressed these challenges to create a comprehensive model and the limits to using the "scammers persuasive techniques model", we turn to the key findings from the victim-based studies.

3.3.2.3. Perpetration techniques

The victim-based studies,whether or not adopting the "scammers persuasive techniques model" as a framework highlight a range of scamming technieques which put psychological pressure on their victims to respond. These can be summarised as follows:

a. **Urgency or scarcity**: Online romance fraud offenders use health emergencies as a tactic to request money from victims (e.g., Carter, 2021; Cross & Holt, 2021). Frequently, these perpetrators maintain that they are unwell or have encountered an incident, such as a car crash, which necessitates prompt medical aid beyond their financial means. This tactic is effective because it infuses urgency and elicits sympathy from the victim. For example, the offender might claim that they need surgery at a hospital, and time is of the essence. These tactics used by online romance fraud offenders are often successful in obtaining money from victims (e.g., Cross & Holt, 2021). Creating a sense of urgency pressures their victims into making a quick decision – a quick decision acknowledging a limited-time window of opportunity to avoid penalties or negative consequences.
b. **Authority or credibility**: Fraudsters may use false or misleading credentials to make them feel legitimate or trustworthy. They may claim to be a government official, a bank representative, or an employee of trusted organizations.
c. **Establishing rapport**: Fraudsters may use techniques designed to exploit their victims' emotions or desires (e.g., Carter, 2021). For example, they may use sympathy or flattery to gain their victims' trust.

    d. **Fear or intimidation**: Fraudsters may also use fear or intimidation to coerce their victims into compliance. For example, they may threaten legal action or imply that harm will come to the victim or their loved ones (e.g., Buchanan & Whitty, 2014; Carter, 2021).

    e. **Phishing**: Fraudulent actors may employ phishing techniques to deceive their targets into divulging confidential information, including financial particulars or login credentials (e.g., Cross & Holt, 2021; Cross & Layt, 2021). This may involve creating fake profiles on dating websites.

3.3.3. Gaps and potential biases in the Literature

Our review identified several critical issues within the broad online romance fraud research field, which require further consideration.

First, aside from Barnor et al. (2020) and Cassiman (2019), none of the studies directly offered offenders' perspectives or had any direct and in-depth engagement with actual offenders. For example, Offei et al.'s (2020) work gathered 320 responses from people at internet cafes, which are considered hotspots for online romance fraudsters. But some (or indeed most) of these respondents may not be online fraudsters because non-offenders also used these internet cafés in Ghana. Similarly, for assertions about online fraudsters, Lazarus (2018) used music lyrics allegedly authored by ex-cybercriminals and their allies. The authors of most or some of these lyrics may not be online fraudsters themselves. Of those studies which did offer something of the offenders' perspectives, there was a reliance upon online data sources such as dating profiles (Kopp et al., 2015), "offenders' messages" (Anesa, 2020), "scammers' adverts" (Jakobsoon, 2016) and "scammers profiles" (Saurez-Tangil et al., 2020). For example, Kopp et al. (2015) used 37 blacklisted dating profiles to generate their analysis of online romance fraud offenders. While these methods provide insight into the self-presentation and tactics of offenders, they do not engage directly with these offenders to provide a deep understanding and comprehensive analysis of motivations, habits, and rationales. This limits our understanding of the characteristics of fraudsters and their "scamming techniques."

Second, there appeared to be a lack of engagement with other fraud studies. Romance fraud was treated as an isolated phenomenon rather than one of a portfolio of options for fraud offered by the digital network. In addition, details of the operation method or perpetration techniques were sometimes missing. For example, Barnor et al. (2020) conducted ten face-to-face interviews and did not focus on how online romance fraud was merged with supernatural powers. While some offender-focused studies (Cassiman, 2019; Lazarus, 2018) did mention cyber spiritualism, they did not engage with them in depth due to the specific scope of their studies.

'Cyber Spiritualism' is a term used to describe a situation where fraudsters invoke supernatural powers to aid their online fraud[3] (Lazarus, 2019). In West Africa, some cyber fraudsters believe that the adoption of supernatural strategies, known as cyber spiritualism, as a means to enhance their success in defrauding individuals (Alhassan & Ridwan, 2021; Monsurat, 2020; Newell,

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[3] However, it is important to note that the term "cyber spiritualism" has both licit and illicit components. In this article, our specific focus is on its illicit or dysfunctional manifestation, particularly in relation to online romance fraud. For a comprehensive exploration of the dual nature of cyber spiritualism, please refer to Lazarus (2019, p. 3-5).

2021; Riedel, 2015). By the same token, some criminals believe that incorporating these supernatural tactics minimizes the likelihood of being apprehended by law enforcement agencies, as Lazarus & Okolorie's (2019) study discussed. Following the rise of online romance fraud, such tactics are commonly employed by 'Yahoo Boys in Nigeria (Lazarus, 2019; Tade, 2013) and 'Sakawa Boys' in Ghana (Alhassan & Ridwan, 2021; Oduro-Frimpong, 2014). If individuals who commit online romance fraud believe that using supernatural strategies can increase their chances of success in defrauding their victims, their practices, motivations, and beliefs are real in their consequences (drawing from symbolic interactionists' insights, such as Thomas, 1923; Thomas and Thomas, 1928).

The absence of the spiritual dimension of online romance fraud is noteworthy as it has been identified as a core aspect of West African online fraudsters in the broader literature. For example, it has been noted that fraud originating from Ghana (Alhassan & Ridwan, 2021; Oduro-Frimpong, 2014; Riedel, 2015), Nigeria (Lazarus, 2019; Melvin & Ayotunde, 2010), and Côte d'Ivoire (Newell, 2021). For other parts of the world, our understanding of online fraudsters' motivations and tactics in general, and romance fraudsters in particular, is much sketchier. The skew towards publications originating from the Global North that the review identified – and was in part a consequence of the selection criteria employed – may explain these limitations in analyzing the cultural context of offender motivations. It is likely that the assumptions on the part of online romance fraudsters in the West African regions that invoking spells or releasing oratory postulations can effectively control victims is clearly crucial to understanding their motivations and modus operandi. Yet this and other cultural factors were only given limited consideration in the research literature selected for this review.

Similar limitations were found in the way victim characteristics were discussed. Whitty and Buchanan (2014) propose that individuals who are highly vulnerable to romance fraud are those who subscribe to the romantic belief of idealization. Other studies link vulnerability to romance fraud to certain personality types (e.g., shyness) (Sorrell & Whitty, 2019) or those who focus on finding their soul mates or ideal partner (Whitty, 2018). Again, this focus on the victim perspective leads to attention to specific victim characteristics at the cost of attention to offenders and tends to omit the spiritual and supernatural dimension of romance fraud victimization detailed in online fraud literature about the African experience, such as Alhassan & Ridwan (2021), Oduro-Frimpong (2014) and Newell (2021).

3. *Conclusion*

This systematic review suggested that a small body of research into online romance fraud has developed, which remains somewhat fragmented and lacks theoretical consistency. While some encouraging progress has been made, overarching theoretical insights are sparse, and the studies, by and large, do not particularly highlight the general and more specific features of online romance fraud compared to other online fraud types. A greater share of the studies we identified was qualitative, perhaps due to the challenges of accessing large, representative samples of victims (or those at risk) and perpetrators. They tend to be dependent upon small, relatively homogenous respondent groups. As a result, there is a lack of generalisability and reproducibility within available studies. In particular, as we have noted, there is limited attention to the full range of methods deployed by online romance fraudsters. There is also only limited acknowledgment of the relevance of the global nature of romance fraud and the specific regional influences which generate it, and the forms it takes. Though West Africa is a

significant center for originating such frauds, more attention could be paid to how cultural factors specific to this region influence the motivations and methods of fraudsters there. Beyond this, we have little understanding of all of the fraud originating from other areas, which would enable a more complete global account and framework to be developed. The bias towards research publications originating in the Global North and the still niche research focus in this area, as indicated by the dominance of certain authors, comes through clearly from this review.

Also, we noticed that overreliance on the "scammer persuasive technique model" may have led many online romance fraud researchers to hypothesize that individuals who seek perfect partners or 'true love' in their online profiles are more vulnerable to falling victim to romance fraud. However, our systematic review has pointed out that this hypothesis failed to consider that most people would want to have an ideal partner at one point in their lives. Hence, the criterion does not make one more vulnerable than others who may not be motivated to have ideal partners. We would argue from this review that a more comprehensive understanding of the factors contributing to susceptibility to romance fraud is needed, alongside a greater focus on the technical and interpersonal means to reduce or avoid it. The review clarified that a richer and more systematic research engagement with online romance fraud as a regional and global phenomenon would be required to understand and respond to it. Our article emphasizes the need for a more extensive empirical investigation of online romance fraud, considering its regional and global dimensions. Such research will enable a better understanding of this complex phenomenon and inform effective prevention and intervention strategies.

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Declaration of interests

☒ The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

☐The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: