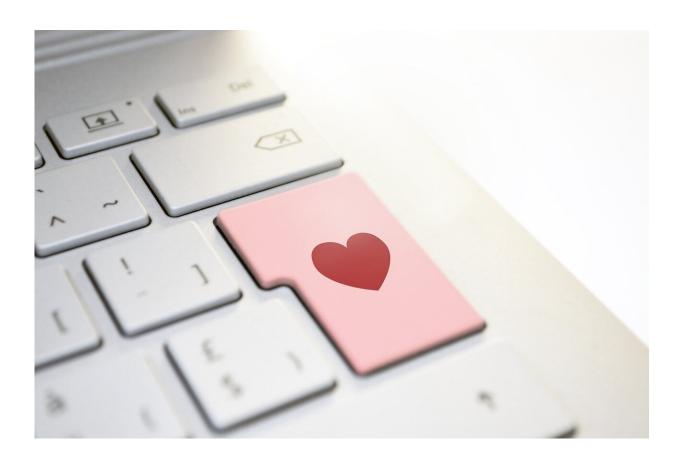


A review of existing studies investigating online romance fraud

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Online romance fraud is an increasingly common phenomenon, which can affect people of all ages worldwide. This type of fraud occurs when a malicious individual or members of a criminal organization engage



with users online pretending to be romantically interested in them, while trying to trick them into sending money or sharing confidential information with them.

Online <u>romance</u> scams can have a detrimental effect on a victim's life, causing them to spend all their savings, become indebted, and even be subjected to blackmail or identity theft. A team of researchers at Abertay University in the U.K. recently reviewed existing literature focusing on romance <u>fraud</u> and then summarized some of the most recurring findings in a paper pre-published on *arXiv*.

"Romance fraud has been growing over the last decade or so and was exacerbated by the COVID-19 pandemic which saw a surge in cybercrime and cyberattacks," Dr. Lynsay Shepherd, one of the researchers who carried out the study, told Tech Xplore. "Our paper provides a comprehensive overview of romance fraud research, which could serve as a starting point for future research in the field."

Dr. Shepherd and her colleagues Mr. Alexander Bilz and Prof Graham Johnson initially screened a total of 232 papers focusing on romance fraud using a common method for performing <u>meta-analyses</u>. A total of 44 were found to be most relevant and were thus included in their final analysis.

"We screened the papers using PRISMA (which stands for Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which provides a checklist of items to be included in a <u>systematic review</u>, e.g., search terms used, the criteria for selecting studies, and the methods used to analyze/synthesize data," Dr. Shepherd said.

"Our study only included research that examined romance scams, including information about the people involved, the psychology behind it, and ways to prevent it. Articles had to be from reliable sources, e.g.,



peer-reviewed journals, books, and dissertations and our search was limited to English language papers that the University had access to. We excluded articles that focused on other types of online dating fraud or had unclear research methods."

By analyzing the findings of the 44 studies they selected, Dr. Shepherd and her colleagues tried to pin down common profiles of romance scammers and factors that can predispose people to becoming victims of these frauds. They showed that while romance scammers can approach victims saying entirely different things or presenting themselves differently, some patterns appeared to be quite common.

For instance, most fraudsters tend to use persuasive language and their interactions with victims generally spans across three broad 'stages'. Firstly, they initiate a conversation with their victims, then they start strengthening their online relationship with them, and finally they get them emotionally 'hooked' or invested in this virtual relationship.

Most fraudsters only start requesting money or confidential information at the final stage of the <u>scam</u>, when victims have become emotionally attached to them. To persuade victims to satisfy their requests, they often use emotional and visceral language that express vulnerability and the urgency to receive some sort of financial help or information.

The military theme was found to be particularly recurring in online romance scams, with many scammers pretending to be in the army and on dangerous missions. In these cases, the scammers often requested money for phony medical or criminal justice emergencies, non-existent fees that they say would allow them to travel and meet victims, and so on.

The researchers also identified common linguistic tactics used to manipulate victims and increase their belief that their online relationship



is genuine, such as asking direct or personal questions, flattering or complimenting them, using pet names, and expressing love or affection in poetic ways. Finally, they outlined some of the typical qualities, hobbies, and interests that fraudsters mention in their online dating profiles.

"Romance fraud continues to be a growing problem, and research in this space is important to reduce victimization," Dr. Shepherd said.
"Researchers, online dating sites, and law enforcement need to work together to solve the problems related to romance scams. Scammers are continually coming up with new ways to defraud people, therefore it is vital to research and find new ways to protect people from these scams e.g., better training, awareness programs, and detection of scams."

In their paper, Dr. Shepherd and her colleagues also identify some characteristics that make people more vulnerable to becoming victims of online romance fraud schemes. These include a high level of engagement in trying to find a partner, especially an international partner, a poor understanding of online scams, limited computer skills, and impulsive personality traits. Well-educated <u>single women</u> who are between 35 and 54 years old appeared to be at a particularly high risk of becoming targets of dating scams.

Finally, the researchers outlined some countermeasures that could help to mitigate the impact of romance scams. These include the introduction of systems to detect fake online dating profiles, machine learning approaches that can identify linguistic patterns or sentences often associated with romance scams, as well as creating or disseminating resources that can help victims to determine whether a profile they are interacting with is fake.

Overall, this recent study offers some interesting insight about common patterns in online dating scams. In the future, it could inform new



research efforts aimed at creating effective computational tools to detect these frauds early and reduce their adverse impact.

"As part of our recent work, we mapped the current research landscape to get an overview of work conducted," Dr. Shepherd added. "We are now <u>continuing our research in this space</u>. For instance, [we] have a Ph.D. student working on a research project investigating approaches of detecting and preventing romance fraud."

More information: Alexander Bilz et al, Tainted Love: A Systematic Review of Online Romance Fraud, *arXiv* (2023). DOI: 10.48550/arxiv.2303.00070

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