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# Online fraud victimisation in Australia: Risks & protective factors

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11/12/2019




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# Consumer fraud victimisation

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## Online fraud

- Responding online to a dishonest invitation, request, notification or offer by providing personal information or money that leads to a negative impact

## Prevalence and impact

- ABS – 8.5% of Australians > 15 years victimised in 2014-15, losing $3 billion
- ACCC – 177,516 scam reports made to Scamwatch in 2018, worth $107 million

## Research questions

- What individual demographic factors predict online fraud victimisation
  - Residence, income, language spoken, Indigeneity, computer usage and security measures used
- What negative life events in last 5 years predict online fraud victimisation
  - Bankruptcy, death of a relative or friend, depression, loss of job, relationship break-up, serious illness, serious accident, serious criminal victimisation
- What behavioural / psychological characteristics predict online fraud victimisation
  - Trusting strangers, helping those in need, seeking opportunities, making impulsive decisions, making intuiting decisions, waiting for something due, dealing with adverse circumstances

# Research project

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## Research team

- AIC – Catherine Emami, Russell Smith, Penny Jorna, Anthony Morgan
- ACCC – Scams Awareness Network – Keith Gunton, Derryn McKay
- i-Link Research Solutions – Daniel Lyons, Muriel Geagea

## Design / methods

- Online survey using two samples (535 victims / 321 non-victim control)
- Matched exactly on age, gender and educational level (176 in each group)

## Victim sample

- Complained to ACCCs Scamwatch in Jan 2013-Aug 2015 of consumer fraud
- Australian residents; $300 or more financial loss experienced

## Non-victim control group

- Members of i-Link online research panel (300,000 member population)
- Australian residents; sent money overseas and satisfied with purchase
- Did not experience scam victimisation, nor complained to Scamwatch

# Descriptive analysis

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## Sending money to a stranger

- Victims more likely to have sent money to a stranger than non-victims
  (Chi-square significant at $p<0.0001$ level)

## Purpose of sending money

- Victims more likely to have sent money overseas than non-victims to pay for –
  Goods and services purchased online; business transactions; sending funds to friends met online

## Payment channel

- Victims more likely to use funds transfers, direct credit or remittances (WestUnion)
- Non-victims more likely to use credit card or escrow services (PayPal)

## Amounts sent overseas

- Victims sent significantly larger amounts overseas than non-victims
  ($z=-7.392$, $p<0.0001$, $n=352$)

## Negative life events

- Victims more likely to have had a relationship breakdown than non-victims
  (Fisher's Exact Test $p<0.05$)

# Multi-variate analysis

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## Hypotheses

- Increased levels of computer security would lead to reduced victimisation
  (e.g. encryption, anti-malware, content filtering and monitoring)
- More time online would lead to reduced victimisation
- Use of credit card / escrow services would lead to reduced victimisation
- Not having a relationship breakdown would lead to reduced victimisation

## Predictor variable

- Victim / non-victim

## Regression variables

- Enhanced computer security
- More time online
- Use of secure payment channels
- Absence of a relationship breakdown
- Trusting strangers and impulsivity

# Logistic regression findings

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| Variable | Odds ratio | SE | Wald (z statistic) | *p*-value |
|---|---|---|---|---|
| Advanced computer security | 0.891 | 0.063 | -1.64 | 0.102 |
| Greater than 10 hours on internet | 0.356 | 0.093 | -3.94 | 0.000 |
| Trust strangers 1—unlikely | 0.679 | 0.212 | -1.24 | 0.216 |
| Trust strangers 2—neutral | 0.385 | 0.131 | -2.82 | 0.005 |
| Trust strangers 3—likely | 0.662 | 0.303 | -0.90 | 0.367 |
| Trust strangers 4—very likely | 0.612 | 0.608 | -0.47 | 0.622 |
| Make impulsive decisions—1 unlikely | 0.705 | 0.235 | -1.05 | 0.295 |
| Make impulsive decisions—2 neutral | 0.458 | 0.174 | -2.06 | 0.039 |
| Make impulsive decisions—3 likely | 0.409 | 0.174 | -2.11 | 0.035 |
| Make impulsive decisions—4 very likely | 0.657 | 0.583 | -2.11 | 0.636 |
| Relationship breakdown had occurred | 1.510 | 0.383 | 1.08 | 0.282 |
| Money transferred via electronic funds transfer or money wire transfer | 8.870 | 0.273 | 7.99 | 0.000 |

# Conclusions



## Significant predictors of victimisation

- Payment channel – victims use less secure channels for making payments
- Payment amount – victims send more money overseas than non-victims
- Payees – victims send money to unknown people rather then known associates
- Online security – victims spend less time online, and use simpler security measures

## Personal characteristics and life events

- No significant predictors of risk present

## Aspects requiring further research

- Relationship breakdown might lead to enhanced risks of romance scams
  - Need to examine type of scam and victimisation
- Prior research has found that victims score highly on scales of impulsivity and lack of self-control (Whitty 2017; Holtfreter, Reisig & Pratt 2008)
  - Need to assess personality characteristics of respondents prior to and after victimisation

# Policy implications

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## Disruption and protective strategies

- Disrupt by identifying payments at risk using AUSTRAC data
- Raise awareness of risks of sending large payments
- Raise awareness of using less secure payment channels
- Increase familiarity with advanced computer security measures
- Raise awareness of verifying the identity of online associates

## Limitations

- Samples relatively small, and based on online activities only
- Respondents not asked if negative life events occurred before or after victimisation
- Respondents didn't indicate how characteristics affected their behavior

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