

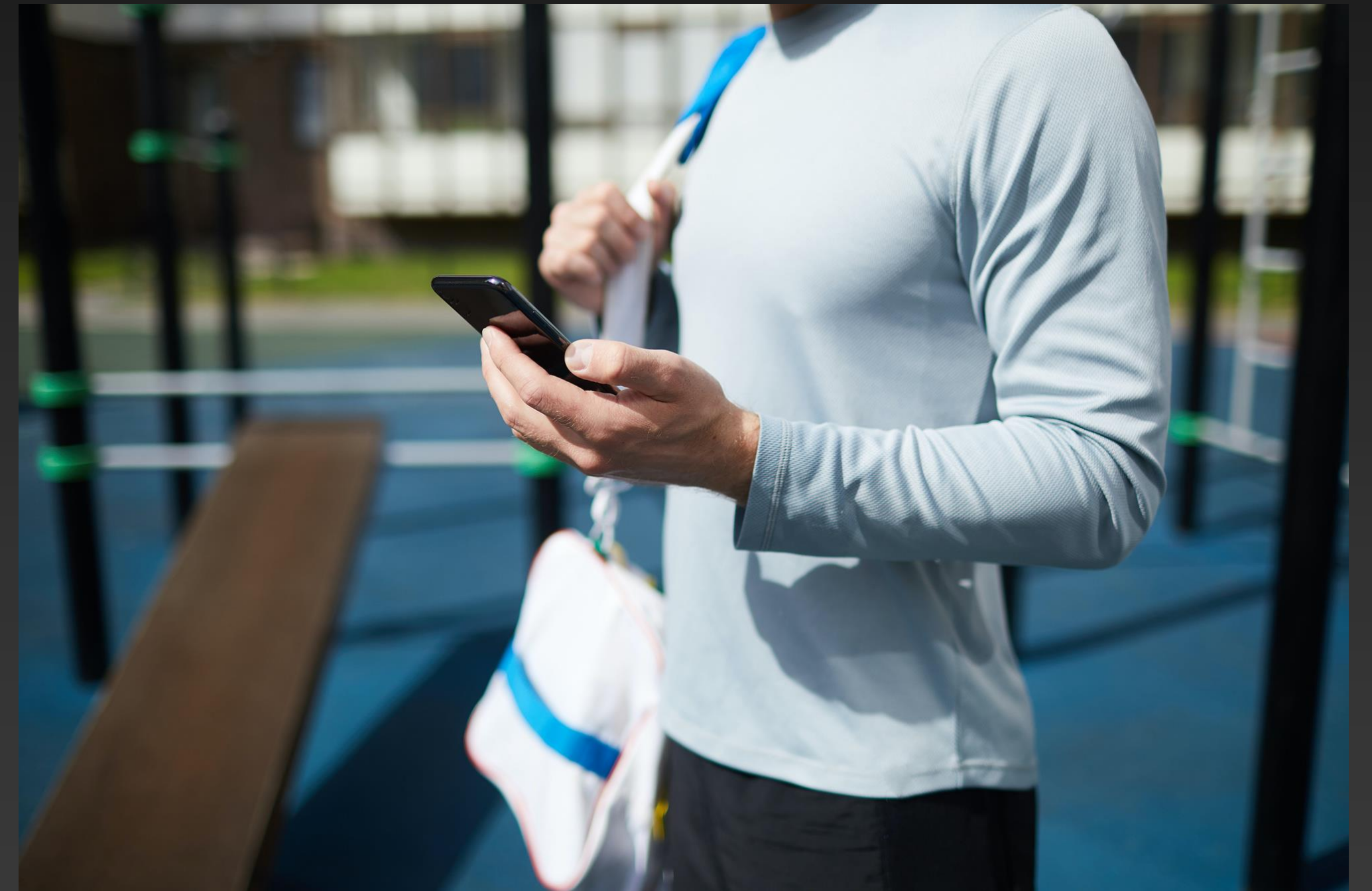
# Practising Safe Sex(t) - A Serious Game

Building a game-based mitigation against Technology-Facilitated Sexual Violence

Tia C - BSc (Hons) Ethical Hacking

# What is Technology-Facilitated Sexual Violence?

- Technology-Facilitated Sexual Violence (TFSV) is sexual violence carried out or enabled by technology.
- Commonly known crimes of TFSV are sextortion and revenge porn.
- However, there are at least **five** main crimes within TFSV.



# What is Technology-Facilitated Sexual Violence?

## Main Crimes

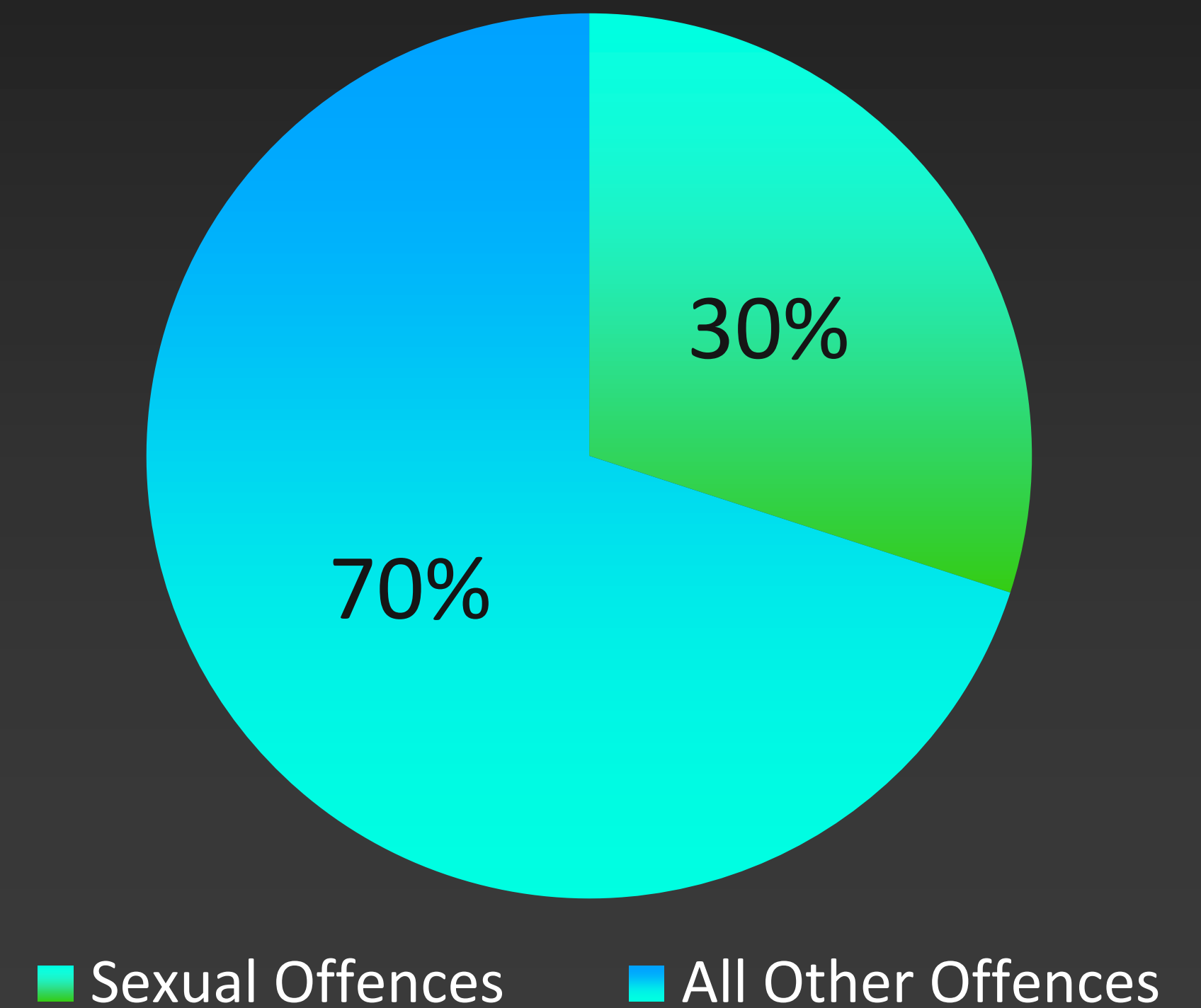
- **Image Based Sexual Abuse**
  - Revenge Porn
  - Sextortion
  - Video Voyeurism
  - Cyber-Flashing (Unsolicited Sexual Image Sending)
- **The use of technology to facilitate in-person sexual violence**
- **These crimes are covered under the Sexual Offences 2009 and Abusive Behaviour and Sexual Harm Act 2016 (Scotland)**

# Why Technology-Facilitated Sexual Violence?

## Why It's On The Rise

- More people accessing the internet = more criminals and victims.
- Pandemic meant more people had to work and live online.
- Also meant people engaged in sexual activities online.
- Caused an influx of people to be victimised by TFSV.

Cyber Offences in Scotland  
(2020)



Out of 14,130 crimes - 4,239 were sexual offences.



# What is the impact of TFSV?

## Victim Impact

- Studies shown women and LGBTQ+ people are more likely to be victims.
- Men are victimised too, but more likely to be perpetrators.
- Victims may experience emotional and mental abuse, as well as physical abuse.
- Victims are also more likely to become depressed and suicidal.



# What are the mitigations available?

## Legal Mitigations

- The police are aware of the rise in TFSV.
- Current policing is **reactive** to TFSV.
- They aim to roll out 'proactive and preventative actions'.
- Recently released the '*Don't Be That Guy*' campaign.
- Focuses on 18-24 year old men, which studies show are more likely to be perpetrators of TFSV.

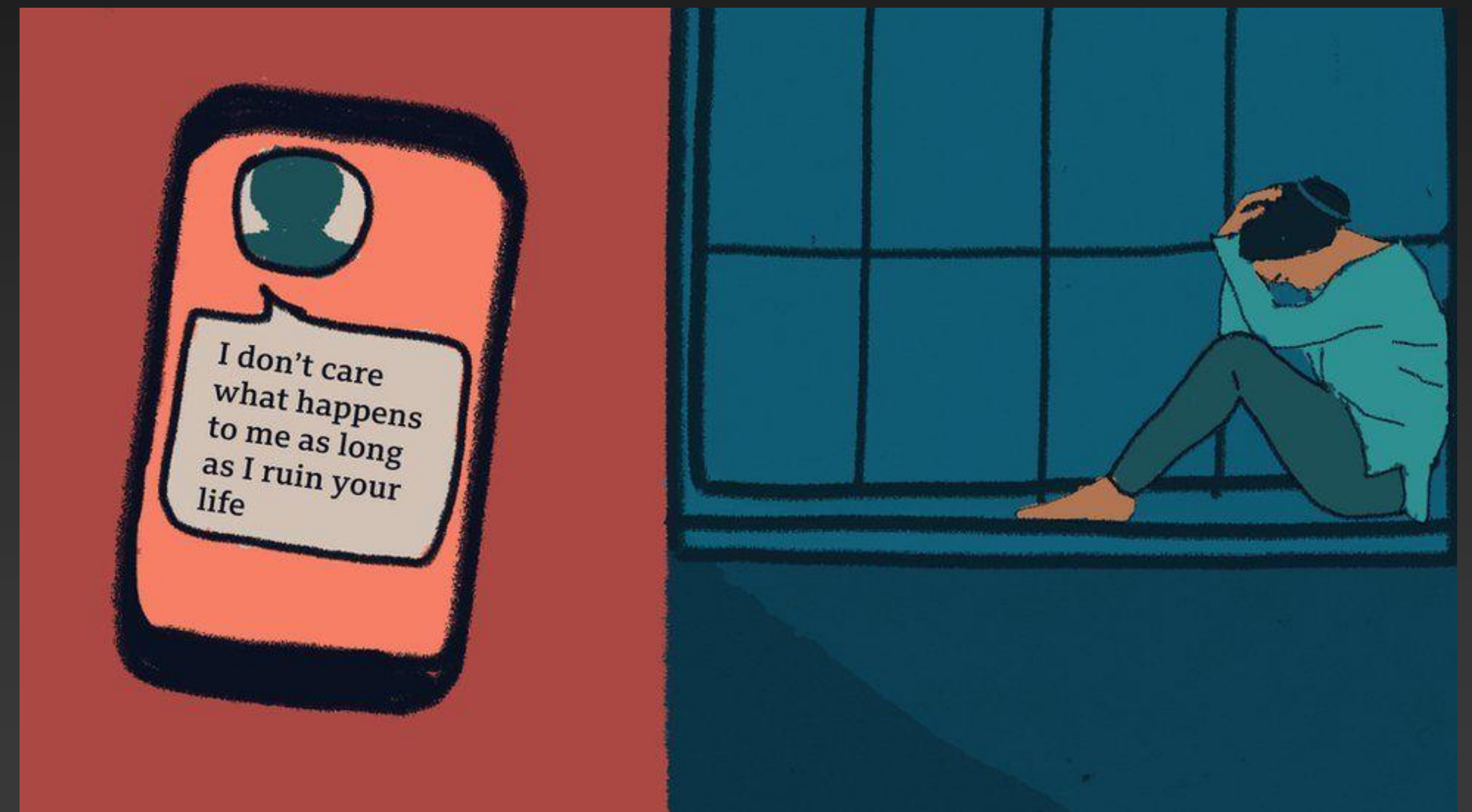




# What are the mitigations available?

## Specialist Mitigations

- Revenge Porn Helpline, Rape Crisis and SURVIVORSUK are all dedicated mitigations.
- Charities have admitted they do not have the training or support required.
- Specialist support is inaccessible - online support is only available a few hours a day.





# What are the mitigations available?

## Social Media Mitigations

- Sites such as Facebook, Twitter and Pornhub have dedicated mitigations.
- Are also **reactive** rather than proactive.
- Involve digital fingerprinting and human reviews of reported images.
- Easily circumnavigated and bypassed.





# Why gamification?

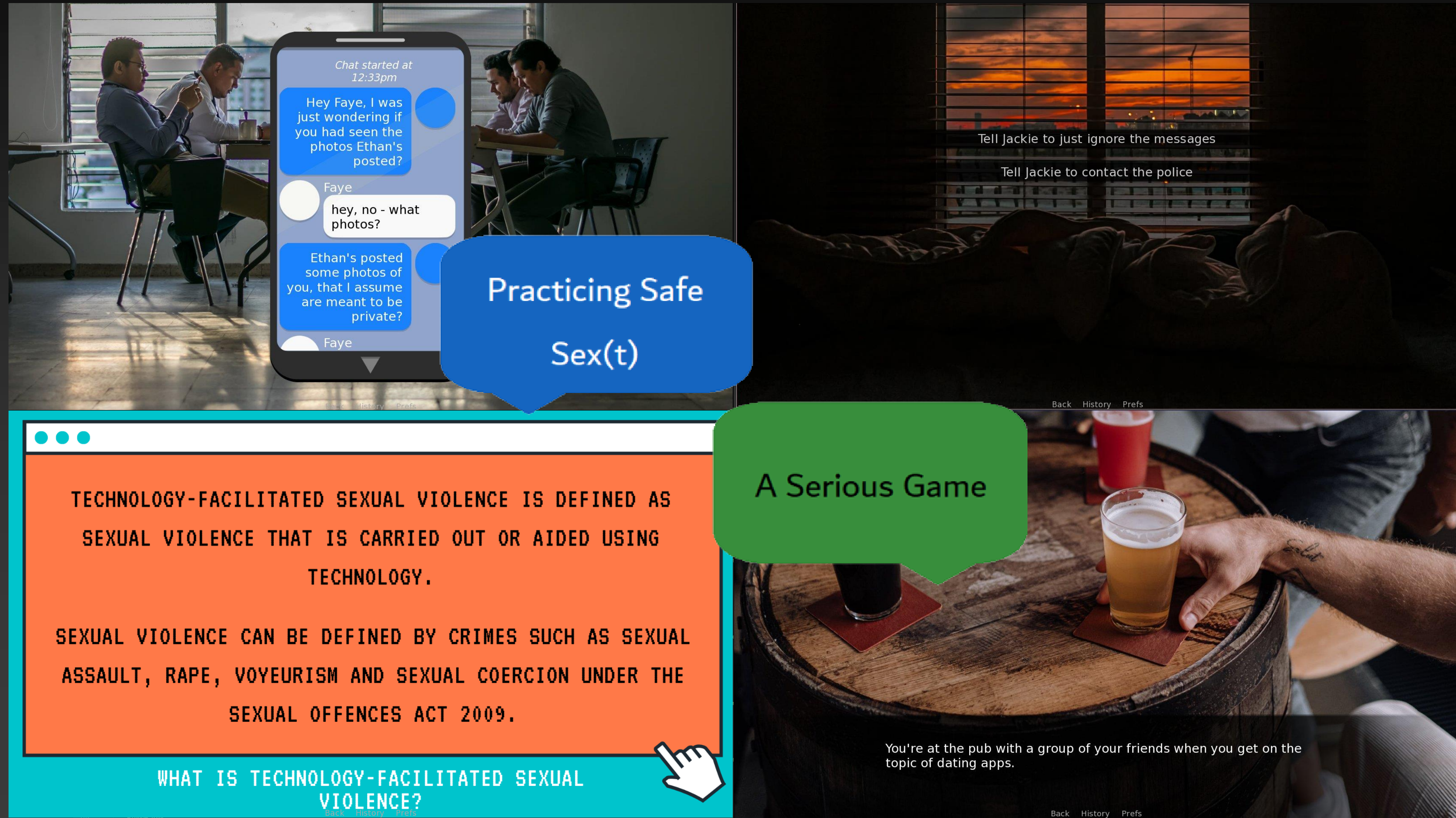
## Using gamification to educate

- Serious games are built for education, rather than enjoyment.
- Intrinsic Motivation is key to gamification effectiveness.
- Autonomy, Mastery, Purpose.
- Prior research into gamification to educate is positive.





# Project Artefact





# How does the game work?

## Visual Novels

- The game is a visual novel.
- Player makes choices that directly affect the character.
- Each choice will change the course of the story.
- For example, the player can report images, ignore them or contact the victim and let them know.



# How does the game work?

How it was built

- Unity was considered, however learning curve was too steep.
- Ren'Py is a visual novel game engine.
- Uses python to code the game.
- Everything was coded by the researcher apart from the phone asset.



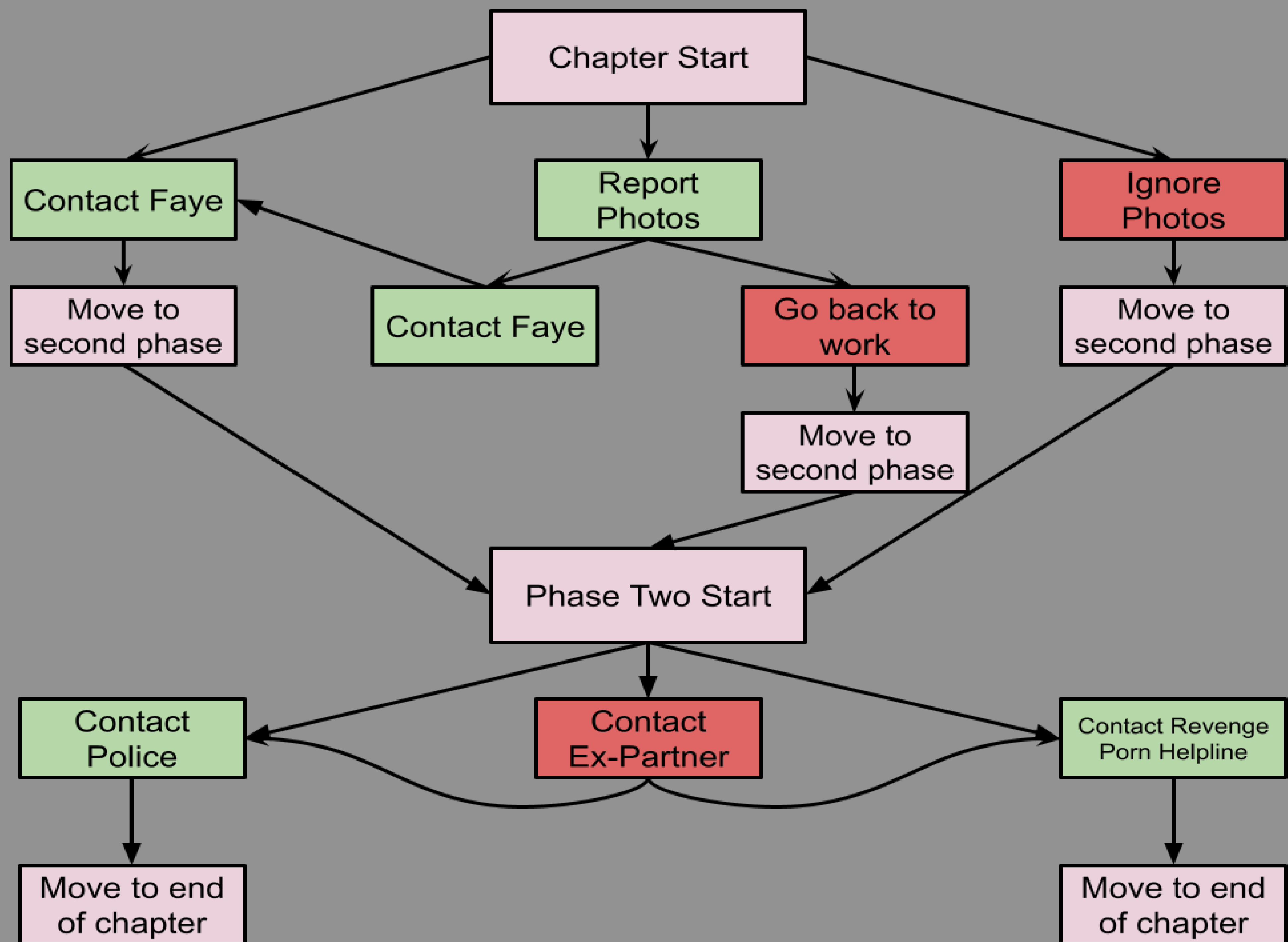


# How does the game work?

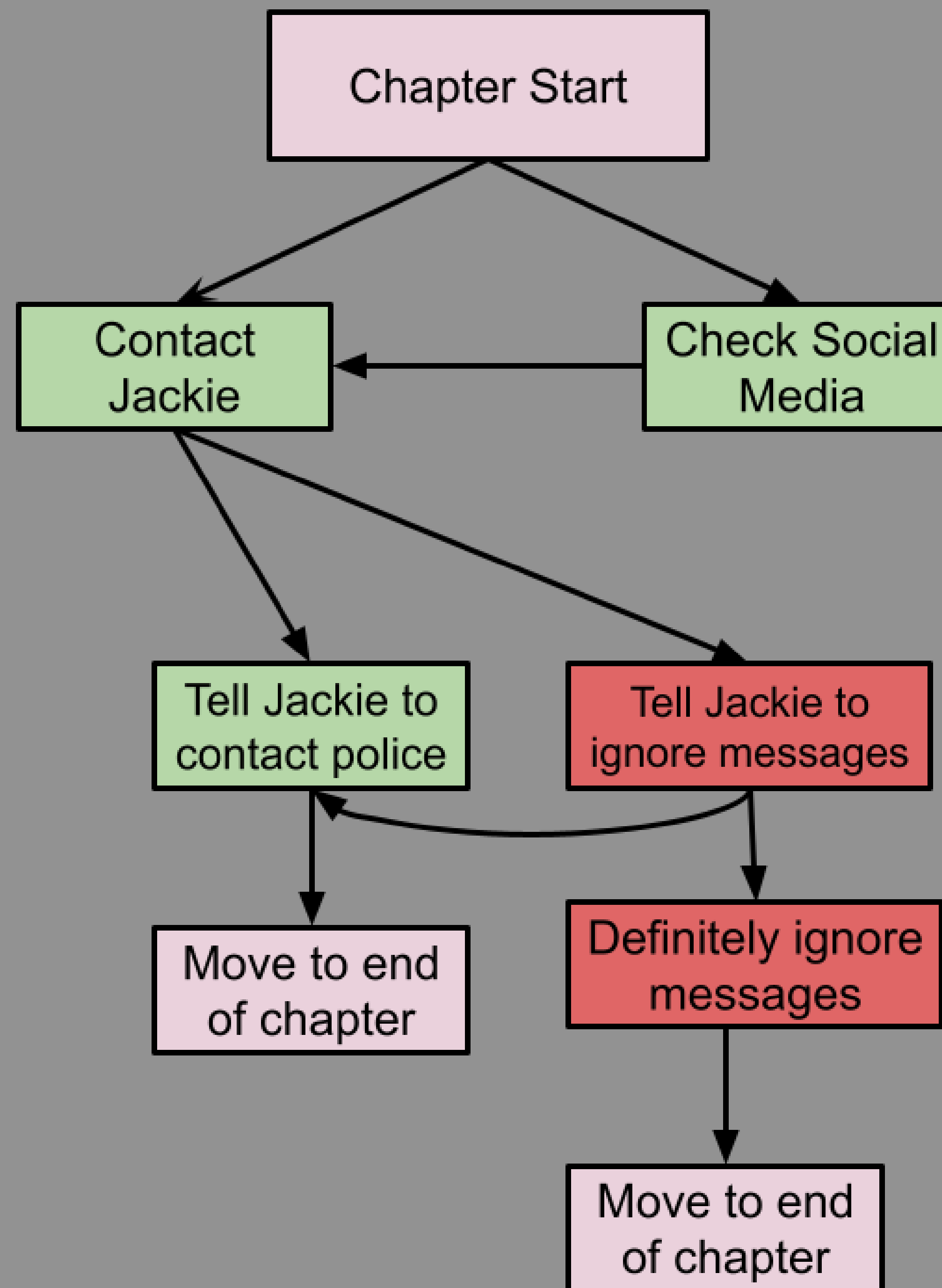
## Chapters

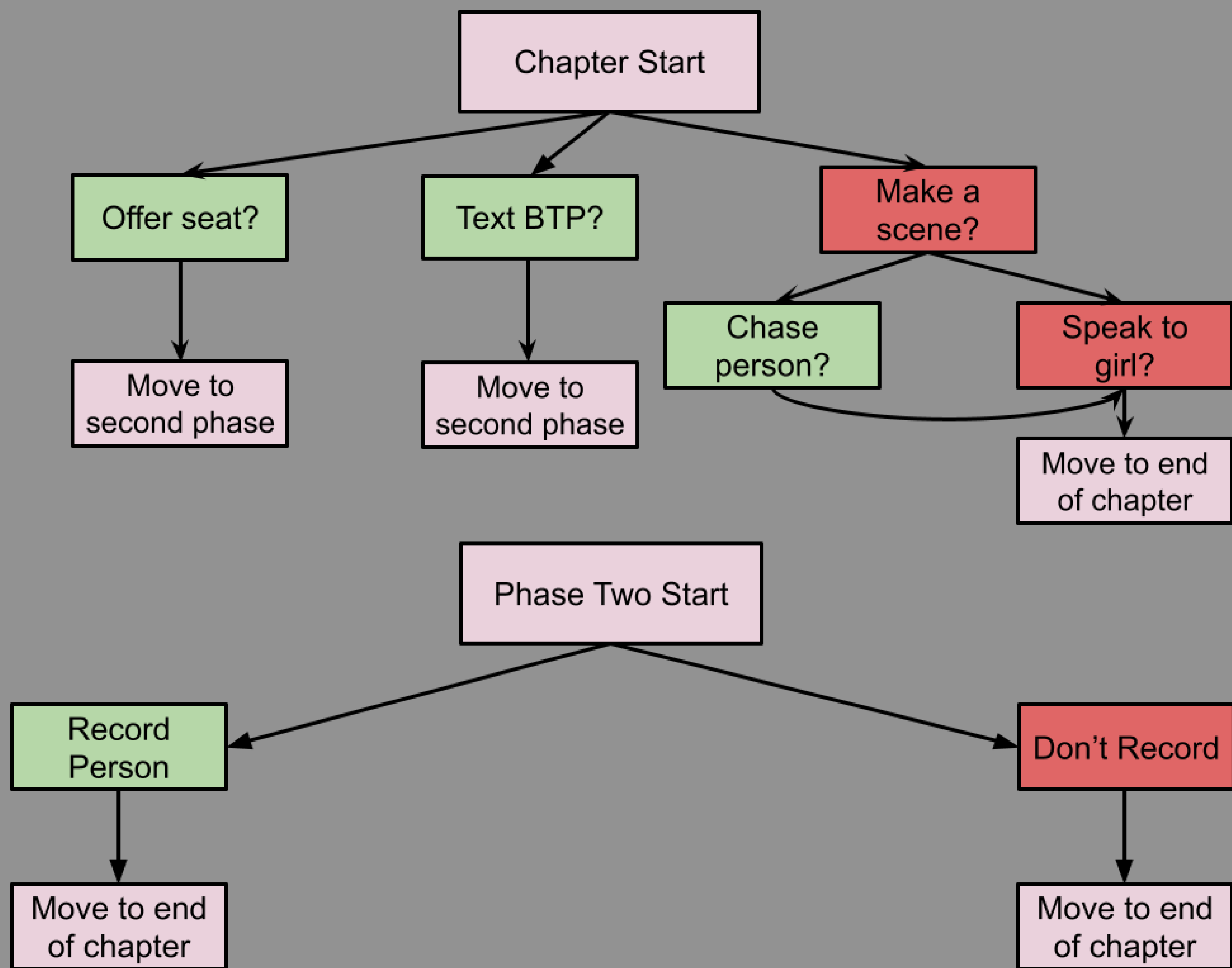
- Each chapter of the novel is based on a crime of TFSV.
- The chapters were designed from victims' own experiences.
- This was done to be more immersive and represent how victims will truly be feeling.



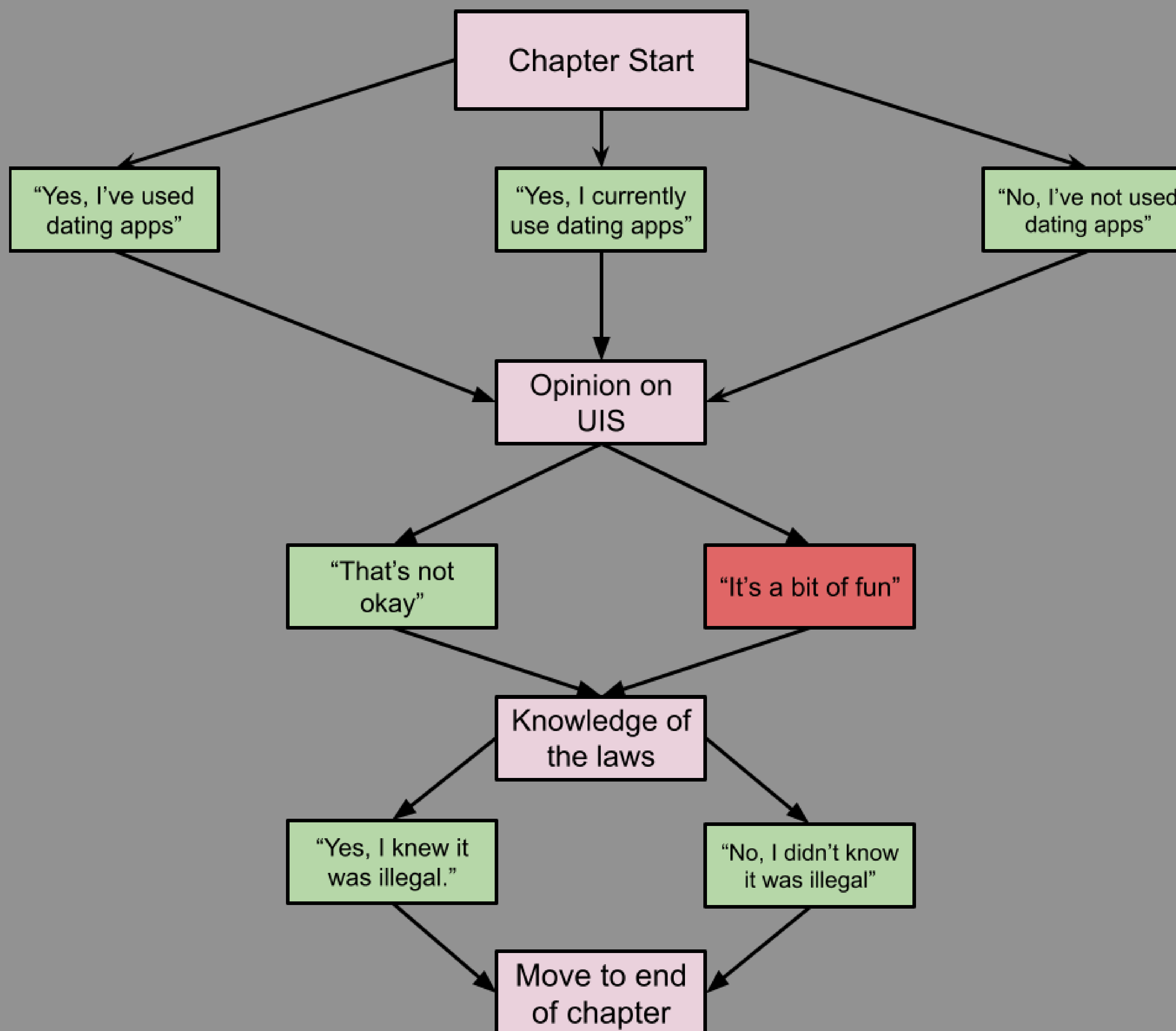


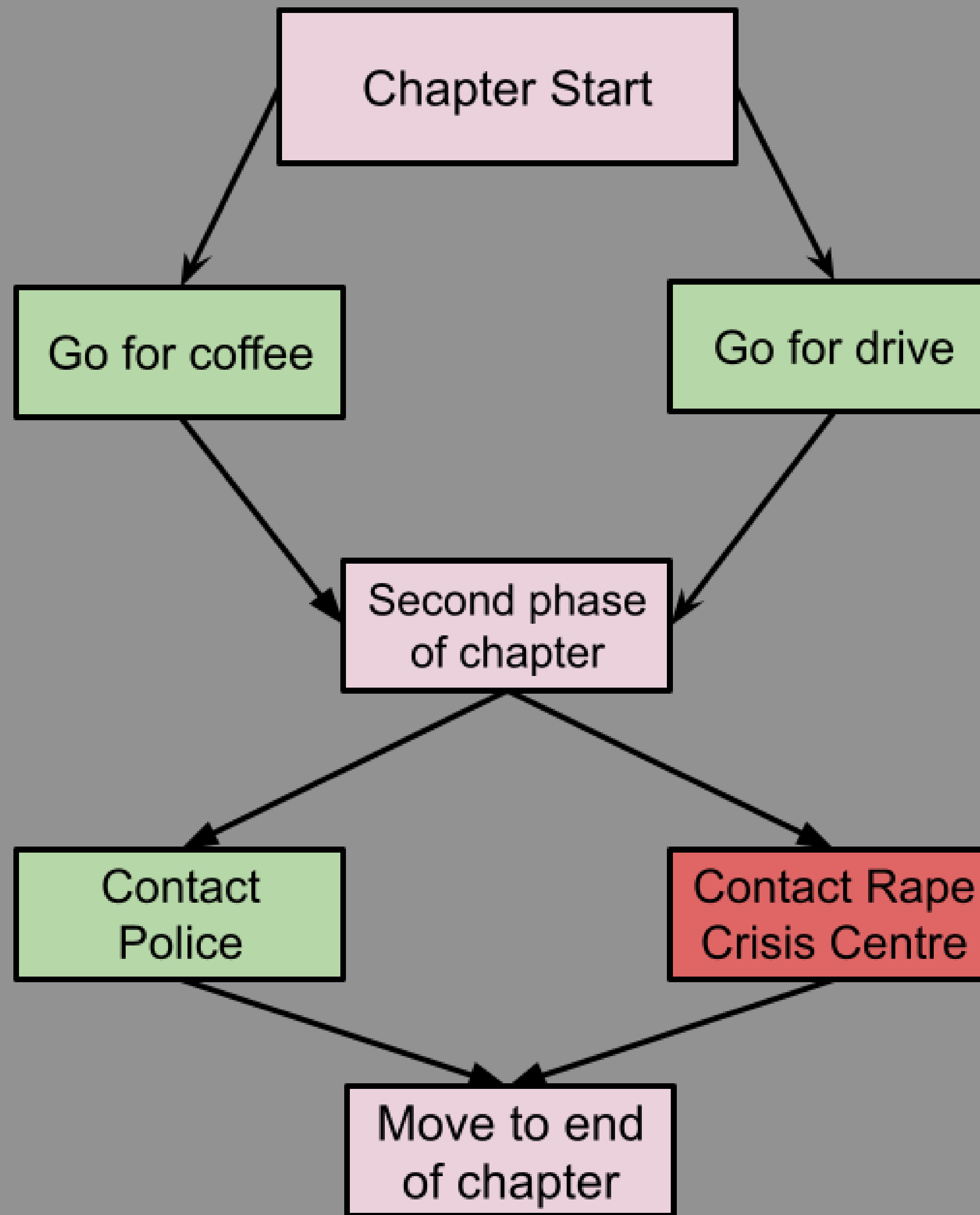














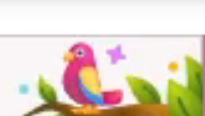
# Demonstration of Game

Tutorial and Revenge Porn Chapter

Practicing Safe  
Sex(t)

A Serious Game

Start  
Preferences  
About  
Help  
Quit





# Evaluation

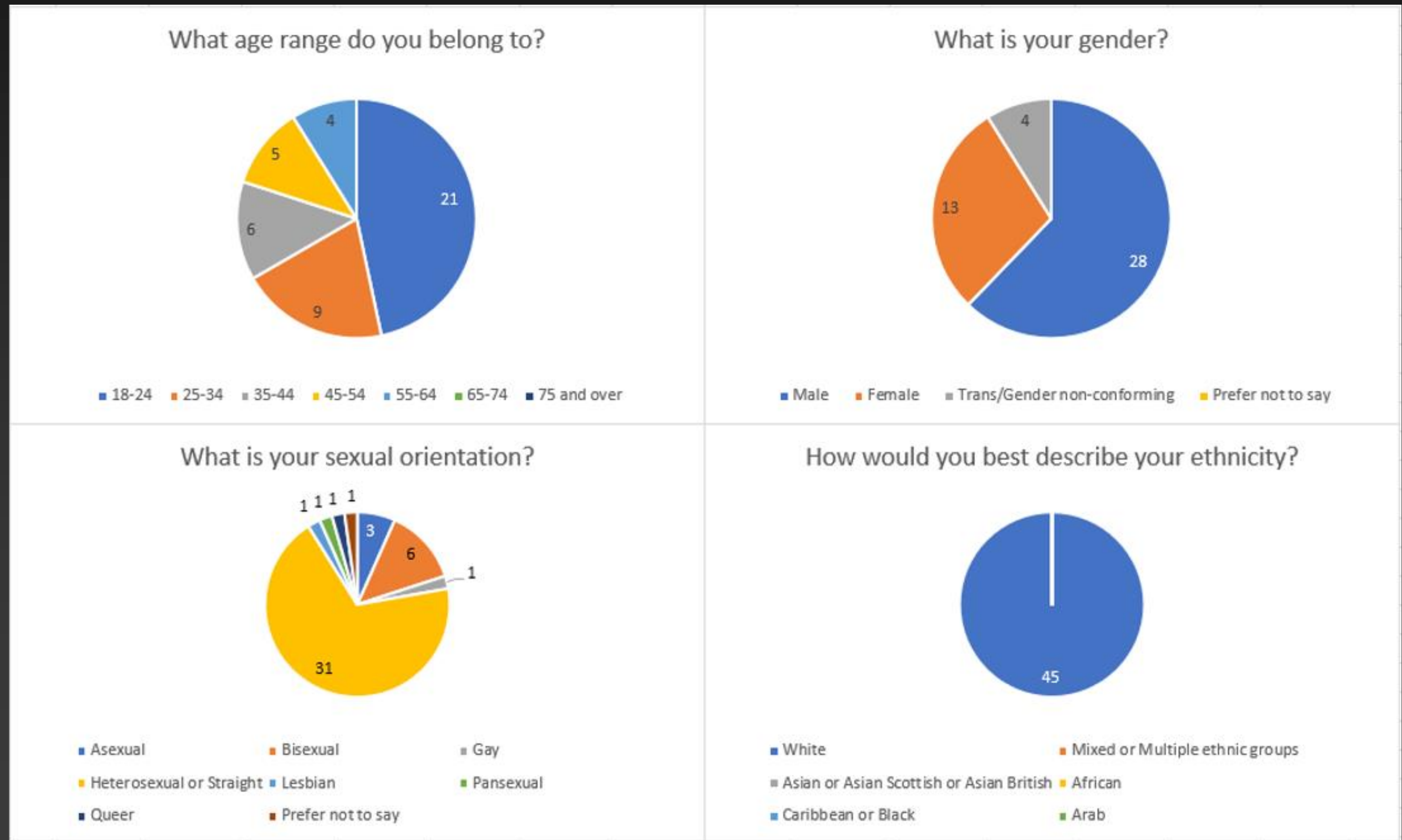
How was the game evaluated?

- Survey was created to evaluate game.
- Pre-game and Post-game questions.
- Demographic factors.
- Where to get help.
- How likely friends and family would be involved.
- Usability of game.
- Suitability of game and narrative.

# Was the game effective?

## Results of the Study

- Forty-five participants taken part.
- A wide range of people from all ages, genders and sexualities taken part.
- The main demographic represented was white, heterosexual males between the ages of 18-24.



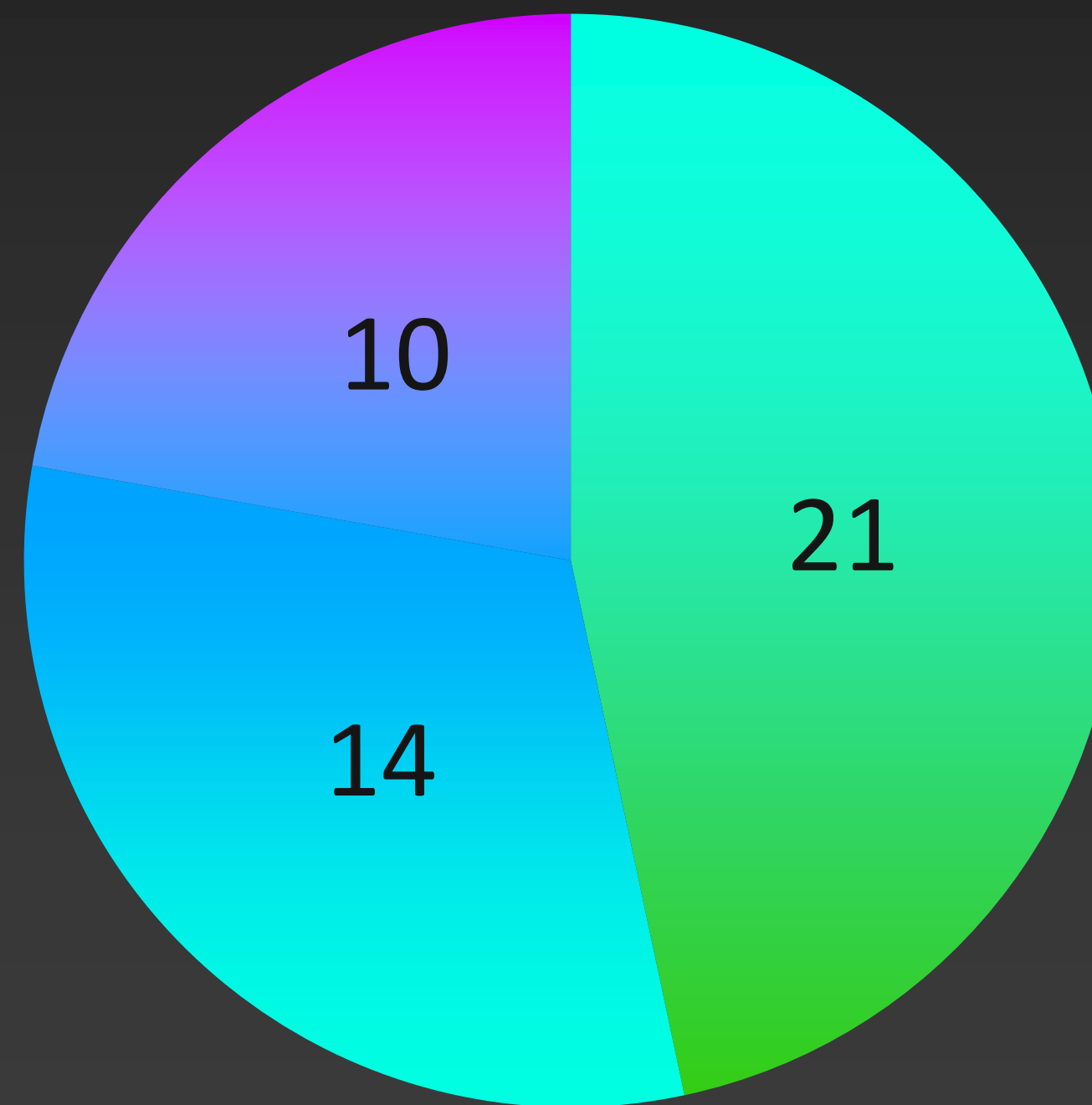


# Was the game effective?

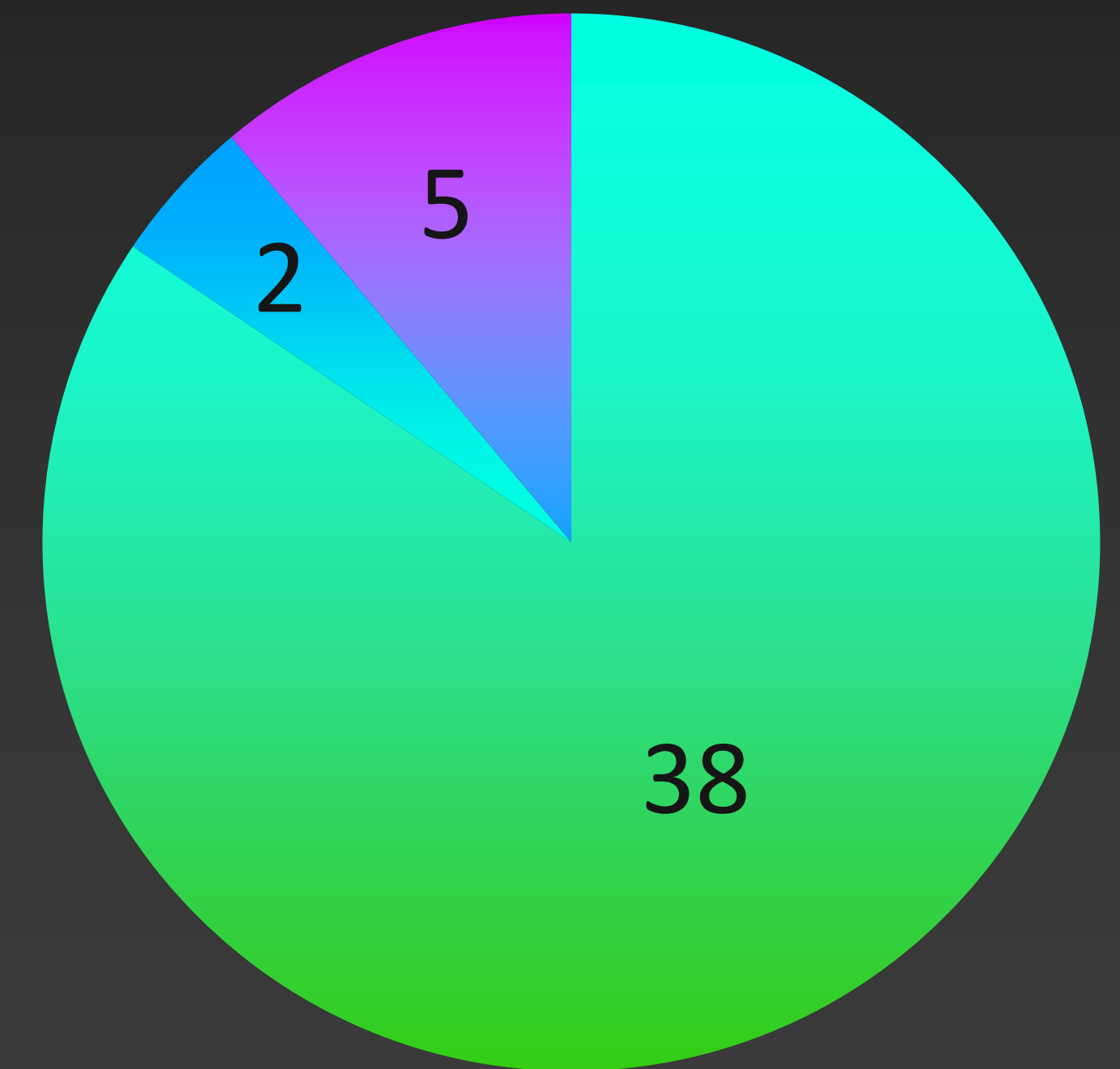
## Results of the Study

- Before playing the game, only 21 participants knew of TFSV.
- After playing, all participants apart from 2, learned or maybe learned about TFSV.
- The 2 who answered no, already knew about TFSV

Do you know what TFSV is?



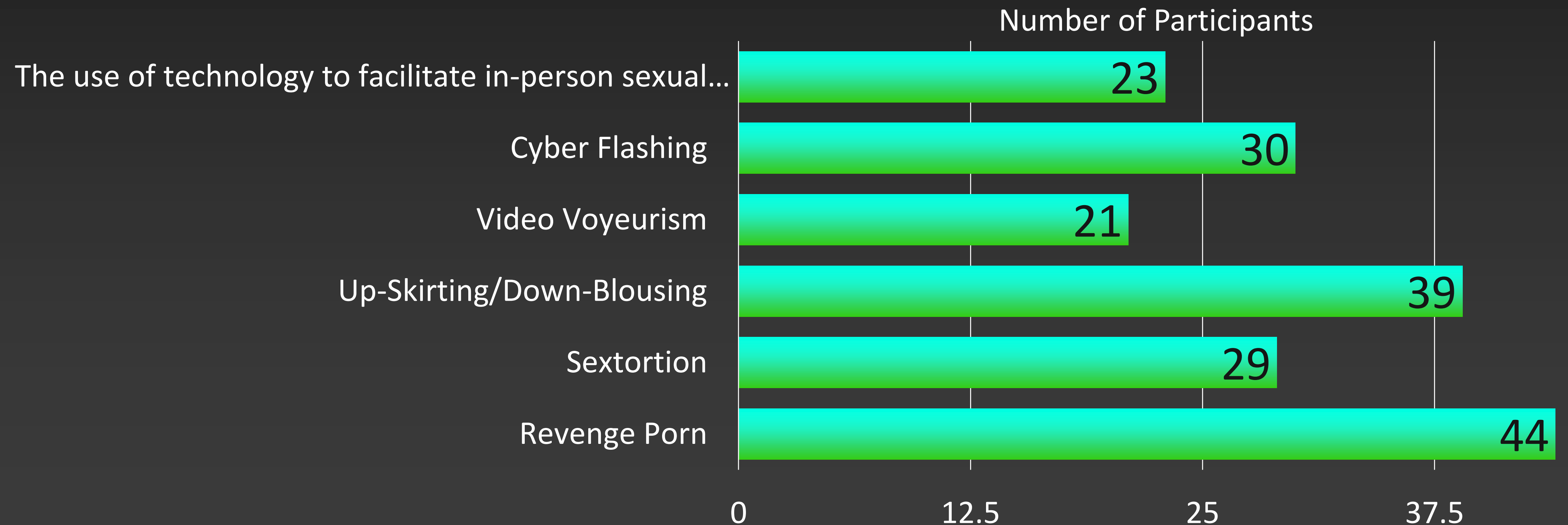
Do you feel like you learned about TFSV?



# Was the game effective?

## Results of Study

Do you know or have heard of any of the following TFSV crimes?



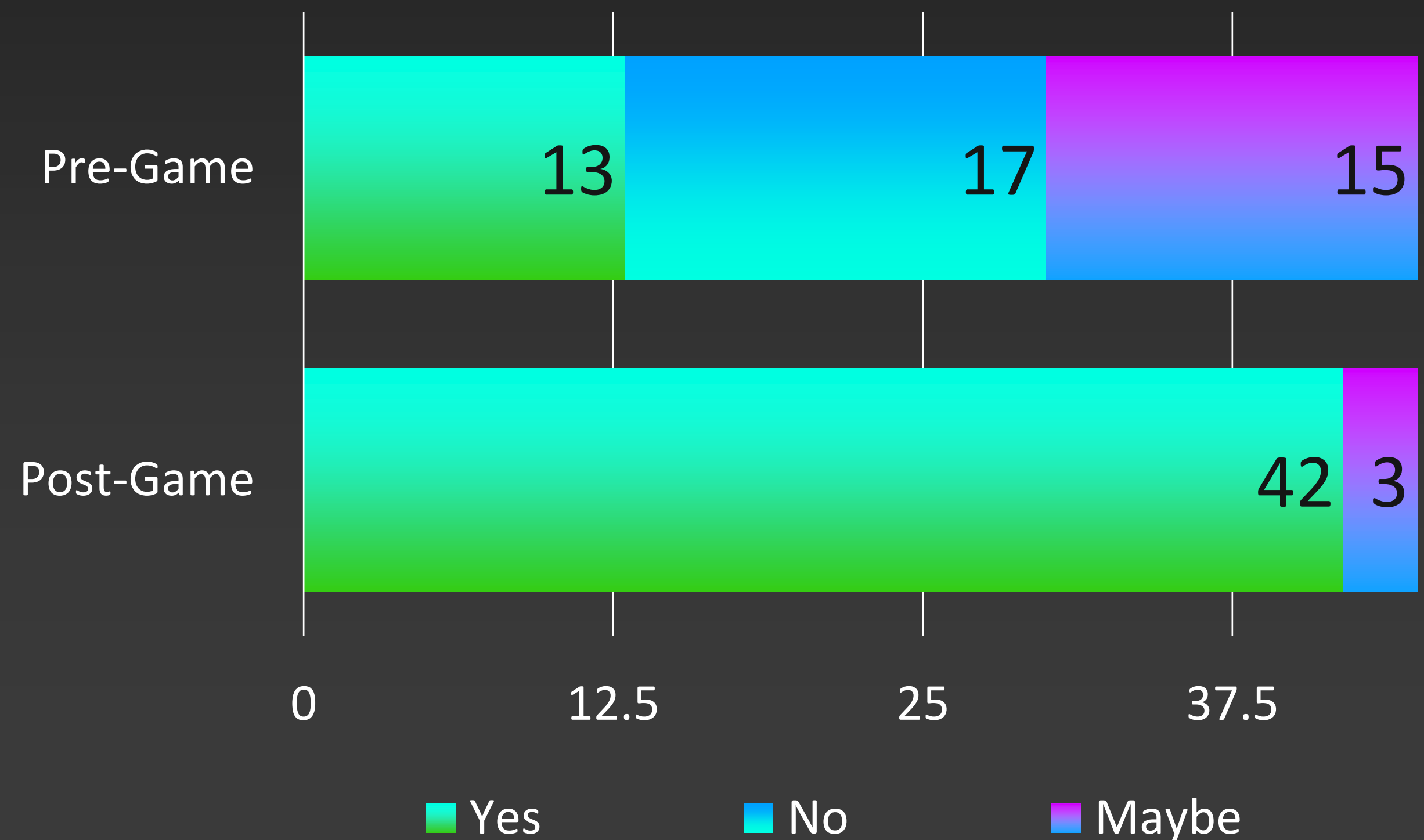


# Was the game effective?

## Results of the Study

- Before playing the game, only 13 participants knew where to get help for TFSV.
- After playing, nearly all participants apart knew where to get help.
- Only 3 felt they maybe knew where to get help for TFSV.

Do you know where/who you would reach out to if you were a victim of TFSV?

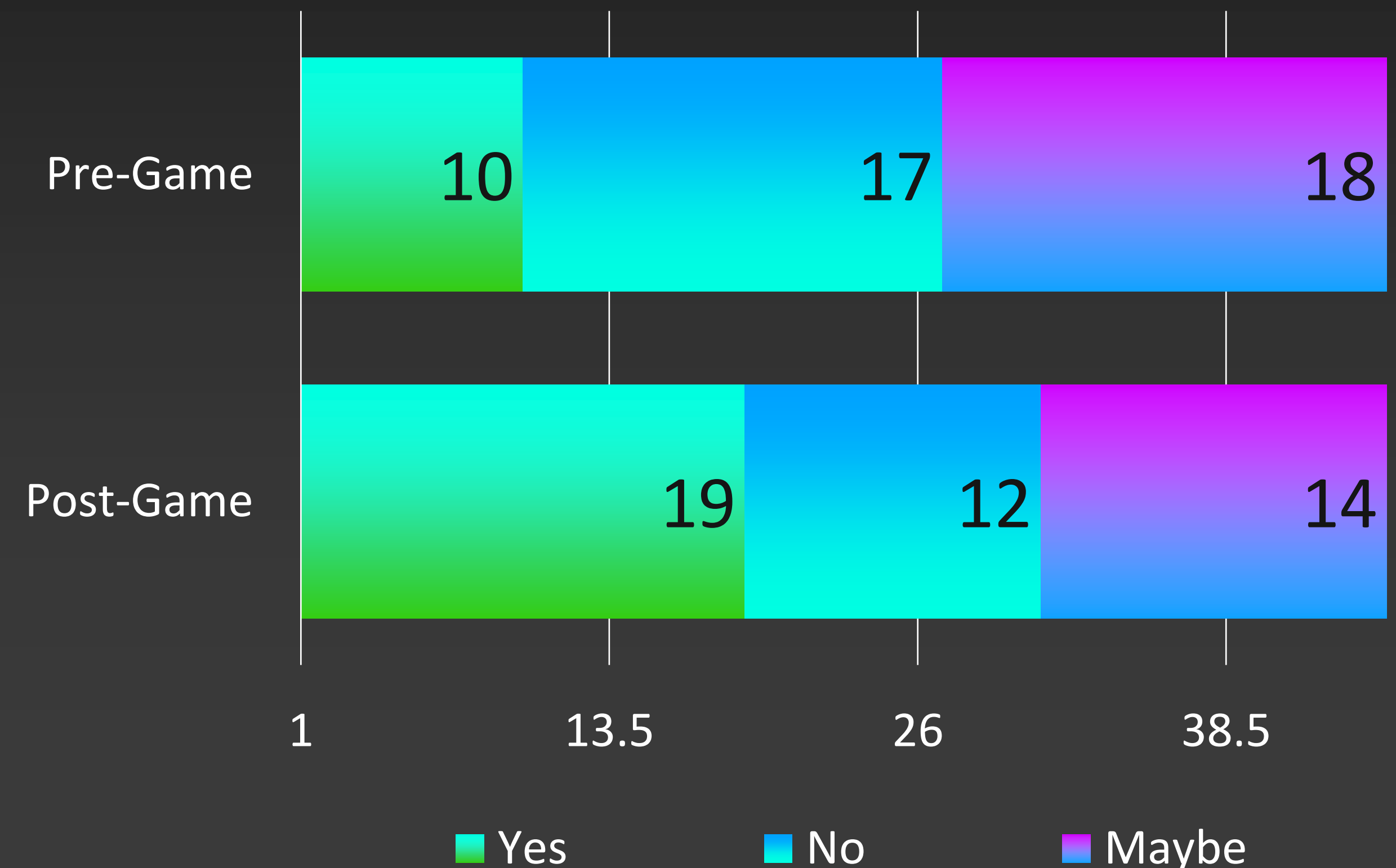


# Was the game effective?

## Results of the Study

### Comparison of likelihood to approach a family member about TFSV

- Most participants would not approach family about TFSV.
- Reasons cited were embarrassment and fear of victim blaming.



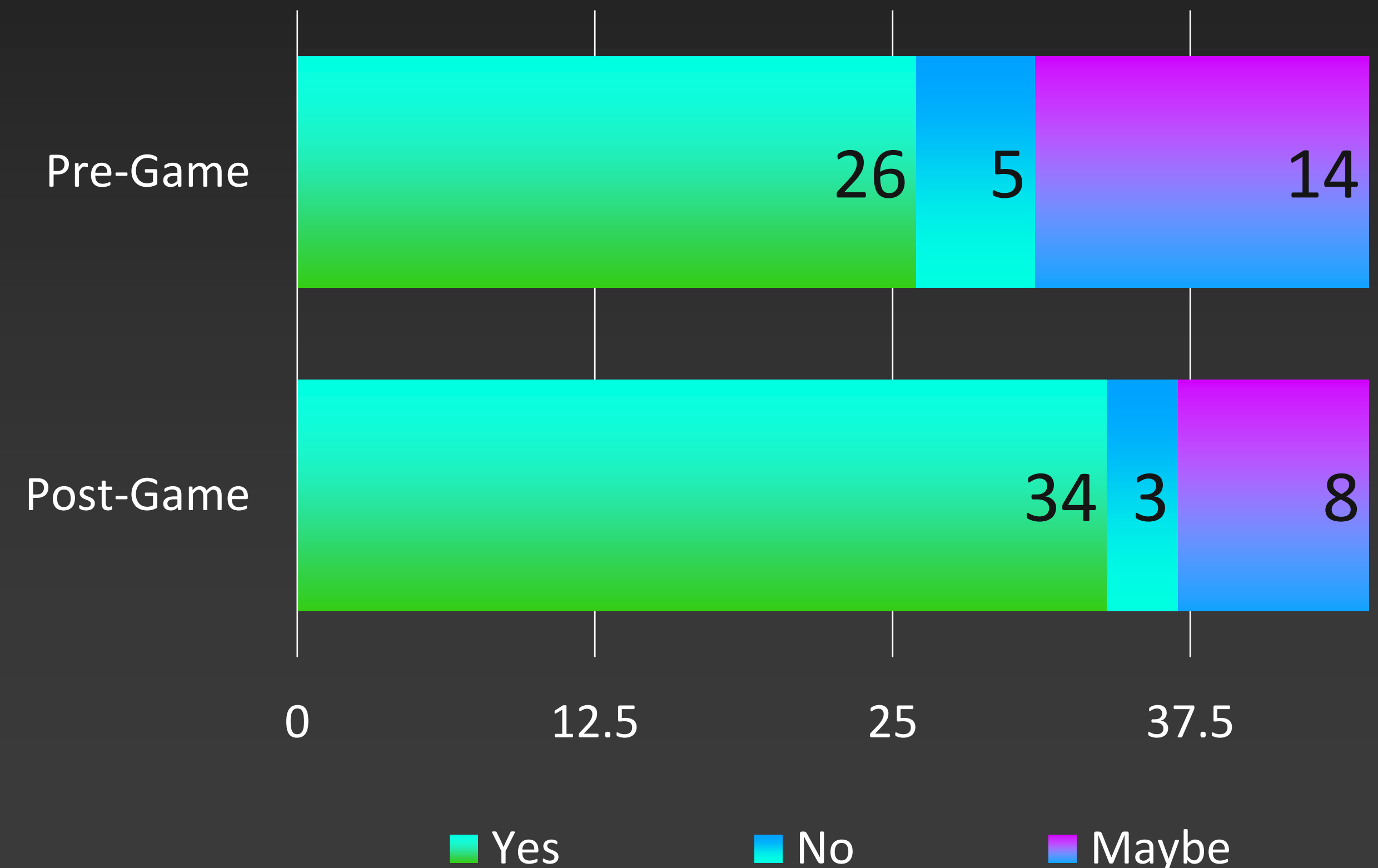


# Was the game effective?

## Results of the Study

- Most participants would or would maybe approach friends about TFSV.
- Reasons cited for not asking friends was fear of judgment and bullying.

### Comparison of likelihood to approach a friend about TFSV

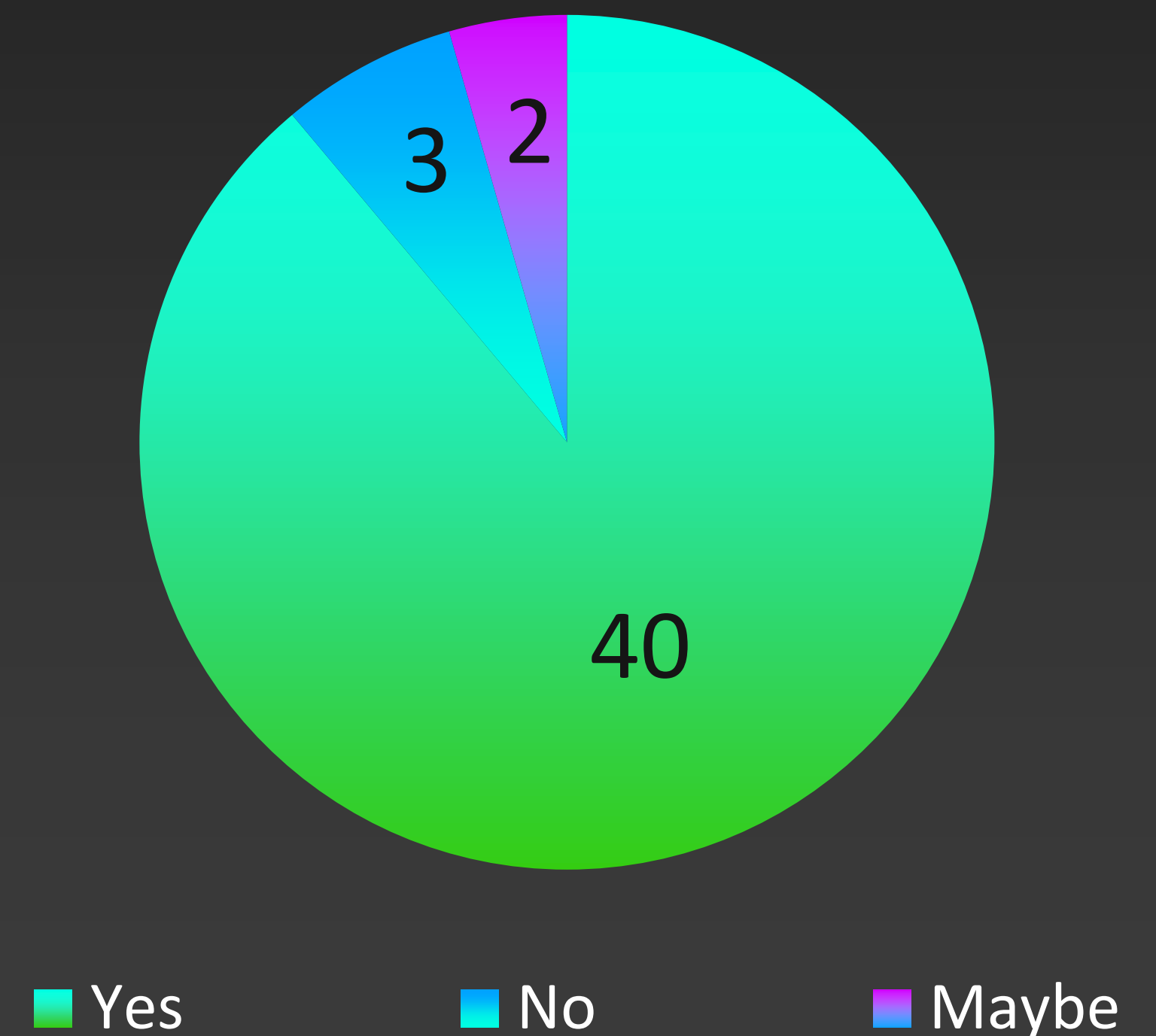


# Was the game effective?

## Results of the Study

- The game was considered usable.
- The vast majority of participants felt the game was effective as a mitigation.
- They cited that the story was believable, immersive and easy to understand.

Did you feel the narrative was suitable for educating people about TFSV?



# Questions?

Thank you for listening.