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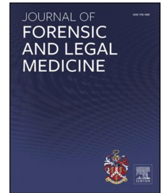

Research Paper

Storage of evidence and delayed reporting after sexual assault: Rates and impact factors on subsequent reporting

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ABSTRACT

Background: Sexual assault (SA) is alarmingly prevalent, yet reporting rates remain disproportionately low. Forensic examinations (FE) play a crucial role in both immediate medical care and evidence collection, yet many victims/survivors may not report the crime initially, leading to the loss of vital forensic evidence. The storage of evidence "Option 3″ care alternative provides post-SA care including FE without initial police involvement.

Methods: This is a cross-sectional study analysing the attendances of people who chose to store evidence at the Dublin Sexual assault Treatment Unit (SATU) between January 1, 2017 and December 31, 2023.

Results: There were 238 storage of evidence FEs ('Option 3') performed during the study period, which represented 12.8 % of all FEs. The majority identified as female (89.1 %), with an average age of 26.6 years. 31.9 % attended within 24 h of the incident, and 51.3 % self-referred. Most assaults occurred over weekends (64.7 %), with alcohol consumption reported in 82.2 % of cases and drug-facilitated SA concerns in 20.2 %. Genital injuries were present in 17.9 % of females and 19 % of males.

Those that availed of storage of evidence (compared with those who initially reported to the police) were significantly more likely to have consumed alcohol ($p < 0.001$) and the assault was more likely to have occurred indoors ($p = 0.002$). There was no significant difference in care option choice for those 'unsure' of the assault occurrence ($p = 0.353$).

Among storage of evidence cases, 20.2 % subsequently reported to the police, with females more likely to report ($p = 0.02$), while people who were uncertain whether an assault had occurred were less likely to report ($p = 0.04$). Genital injury ($p = 0.822$), victim-assailant relationship ($p = 0.465$), assault location ($p = 0.487$), and substance consumption ($p = 0.332$) did not significantly affect subsequent reporting rates.

Conclusions: The availability of storage of evidence has afforded people the opportunity to access prompt, responsive SATU care including collection of forensic evidence which may have significant evidential value. This approach provides further opportunity for comprehensive detection of a crime, even if reporting to the police is delayed.

1. Introduction

Sexual assault is widespread in society with a recent national survey in Ireland reporting that 52 % of women and 26 % of men disclosed experiencing some form of sexual violence in their lifetime.[1] Despite this high prevalence rate, the numbers reporting these crimes to criminal justice agencies are low. A large gap exists between the prevalence of sexual assault and the number of reported incidents, meaning that the true prevalence of sexual crime is frequently unknown and likely be significantly higher than routinely collected statistics suggest.[1,2]

Several factors contribute to the decision not to seek help or to report sexual assault. These include feelings of shame or embarrassment, a desire to forget the incident, a lack of belief in the effectiveness of support systems or their ability to protect survivors, difficulties in reporting when the perpetrator is known to the victim/survivors (such as a family member or friend), fear that reporting may result in further psychological harm due to disbelief, or if the survivor was under the influence of alcohol or drugs at the time of the assault.[3–6] Moreover, certain demographic groups facing heightened societal pressures are less likely to report, including males, gender diverse individuals, those with physical or mental disabilities, individuals struggling with addiction, or ethnic minorities.[4,7]

Forensic examinations (FE) following incidents of sexual assault serve two primary purposes. The first is to provide immediate medical

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care and address any urgent injuries or support needs.[8] The second is to accurately document injuries and gather relevant forensic evidence.[9] It is important to recognise that not all people will initially report the crime, which means they are not accessing either FE or even necessary medical or psychological attention.[3,10]

To address this issue, a storage of evidence care option, colloquially referred to as “Option 3”, was introduced to the Sexual assault treatment unit network (SATU) network in the Republic of Ireland in August 2016. This option allows individuals aged 18 and over to access acute post-sexual assault healthcare and support while ensuring timely and secure collection and storage of forensic evidence concurrently. By providing this option, people have time to decide whether they want to engage with the criminal justice system, while safeguarding crucial evidence in the event they choose to make a formal police complaint. A previous study analysed subsequent reporting rates over the first 4 years of this initiative and showed that 20 % of those who had availed of a storage of evidence care option subsequently reported the incident to the police.[11]

2. Definitions

2.1. Sexual assault

Completed or attempted penetration of the person’s vagina or anus by a penis, finger, hand or object without consent. The nature of the penetration is classified as unknown if the person suspected sexual assault but had no or incomplete memory of the incident.

2.2. Care options

The details/definitions of care options are shown in Table 1.

2.3. Assailant descriptors

- Stranger: A person with whom the victim/survivor has not had a previous interaction with.
- Recent acquaintance <24 h: refers to individuals who have only recently met or become acquainted with each other within a time frame of less than 24 h
- Acquaintance >24 h: A person that the victim/survivor has known for longer than a 24-h period.
- Intimate partner: A person with whom the victim/survivor has a close personal relationship involving emotional, romantic, and/or sexual connections
- Ex-intimate partner: A person with whom the victim/survivor has had a close personal relationship involving emotional, romantic, and/or sexual connections in the past which has ended.
- Person in authority: A person is responsible for the education, supervision, training, treatment, care or welfare of the victim/survivor e.g. health care provider, teacher, manager.
- Unknown: The victim/survivor has no recollection of the assailant and is therefore unable to give description of the victim/survivor -assailant relationship
- Other: Where the description of the assailant does not fit into any of the other categories.

Table 1
Care option descriptions available at a SATU as adapted from the SATU National Guidelines.[10] *Regardless of which care option is chosen, people are offered examination, emergency contraception and STI prophylaxis (if relevant) as well as follow-up care.

	CARE OPTION DESCRIPTION*
Option 1 “reporters”	Forensic Examination[a] with An Garda Síochána[b] (Police) involvement
Option 2 “health-check”	Health check (no forensic examination)
Option 3 “storage of evidence”	Forensic Examination[a] without An Garda Síochána[b] (Police) involvement and storage of evidence at SATU for 1 year/a further year with patient consent

[a] ‘Forensic Examination’ involves documentation of injuries (if present) and the collection of forensic samples from the victim’s/survivor’s body including intimate samples for DNA analysis.
[b] An Garda Síochána = Irish police force.

2.4. Genital injury

Injury types included bruises, abrasions, lacerations, incised wounds, penetrating (stab) wounds and burns. Redness and/or tenderness were not included due to their non-specific nature. Injuries considered by the forensic clinician to be self-inflicted were excluded.

2.5. Subsequent reporters

Those that initially attended as a storage of evidence attendance and subsequently reported to the police.

3. Aims

1. Provide a descriptive analysis of the characteristics of storage of evidence attendances (“Option 3”).
2. Compare reporters (“Option 1”) to storage of evidence attendances.
3. Compare those who had availed of storage of evidence and who subsequently reported the crime to the police versus those who did not.

4. Methods

4.1. Selection of study participants

This was a cross-sectional at the Dublin SATU based at the Rotunda Hospital, analysing the attendances of all people who availed of a FE with or without police involvement over a 7-year period (January 1st, 2017–December 31st, 2023). *3.2 Study setting/care options:* The SATU network in the Republic of Ireland comprises six units nationally that provide 24/7/365 care to anyone 14 years or older who discloses contact sexual assault. The Dublin unit, based at the Rotunda Hospital is the busiest unit, accounting for approximately 40 % of cases nationally each year. These units provide three care options, which involve either a FE with police involvement (Option 1), a FE without police involvement (storage of forensic evidence/Option 3) or a health-check with no FE performed (Option 2) see Table 1. The FE involves a whole-body examination (top to toe, front & back) and an ano-genital examination, where injuries can be identified and recorded. Genital examinations are performed by direct visualisation without the use of magnification techniques (colposcopy etc) or the use of dyes. Sterile speculums and proctoscopes (where indicated) are used to visualise any internal genital findings. Forensic samples including swabs for DNA and samples for toxicology are also obtained, with type and location of samples being determined by the type of assault disclosed and the duration since the incident. A paper medical record is created for each attendance and all findings are recorded contemporaneously. After each SATU attendance, anonymized demographic and incident details are transferred from the paper medical chart to the national database. The database is a secure web-based system which is hosted in the HSE’s (Ireland’s National Health Service) data centre. The system is accessible to users on the HSE’s internal private network via a web browser. There are firewalls in place to prevent unauthorised access. This data includes demographic details as well as assault and attendance details. This data does not include specific type of assault or type of injury. Type of assault and injury detail has been collected by individual chart review. 3.2 *Forensic examination without police involvement (Storage of forensic evidence)/”*

Option 3": One of the care options available to patients who self-report to an SATU is for a storage of evidence examination, colloquially known as "Option 3". Following provision of written informed consent, this involves a FE being performed with the retrieval of forensic swabs and allows those who are undecided whether they want to report the crime to the police, to access post-sexual assault medical care with the additional preservation of DNA evidence. These forensic samples are stored in a secure password protected area for a period of 1 year (which can be extended by a further 1-year period at the patient's request) at the SATU, during which time they can be released to the police with the patient's consent if the crime is subsequently reported. If a complaint is not made, the evidence is destroyed after the time period has elapsed. Forensic samples are never processed unless the crime is reported to the police. Until recently this care option was only offered to people aged 18 years and over, however, since July 2023 it has also been available for people aged 16 years and above (with parent/guardian also providing written informed consent for people aged 16 and 17 years.)

4.2. Statistical analysis

Irrevocably anonymized patient demographic data as well as incident and attendance details were imported into Microsoft Excel from the national SATU database. Patient paper charts were reviewed for collection of examination data (including injury data). The data was then coded and imported into SPSS (version 29; SPSS, Chicago, IL). Descriptive analysis was performed for all variables with frequency and percentages given. Descriptive bivariate analysis was performed to study associations between various characteristics of the assault (attendance/incident details) and the likelihood of availing of a storage of evidence and subsequent likelihood of reporting to the police. We report numbers, percentages and p values describing the probability that an association was due to chance. The Chi-Square was performed to compare relative frequencies. Odds ratios (OR) and 95 % confidence intervals (CI) were also calculated.; statistical significance was defined as p-value <0.05.

Ethical approval

Ethical approval for this study was sought and granted from the Research Ethics Committee, Rotunda Hospital.

5. Results

During the seven years studied, there were 6443 attendances to the national SATU network with 2508 of these at the Dublin SATU. 756 people (11.7 %) chose 'Option 3'.

Of those who attended the Dublin SATU, 1854 underwent a FE, of which 238 were performed as storage of evidence cases. This represents 12.8 % of FEs or 9.5 % of all attendances to the Dublin SATU and 31.5 % (n = 238/756) of all storage of evidence cases nationally.

5.1. Storage of evidence attendances

5.1.1. Victim/survivor demographics

89.1 % (n = 212) of the study population identified as 'female', 8.8 % (n = 21) as 'male' and 2.1 % (n = 5) as 'other'. The average age of attenders was 26.6 ± 8.6 years old with an age range from 17 years old to 61 years old. 37.3 % (n = 142) were employed, 24.9 % (n = 95) were unemployed and 26.2 % (n = 100) identified as students. 86.7 % (n = 312) were Irish nationals.

5.1.2. Attendance details

Those that attended within 24 h of the incident represented 31.9 % (n = 76) of cases, with a further 42.9 % (n = 102) attending between 24 and 72 h. Attendances that took place on weekdays (Monday-Thursday) represented 65.1 % (n = 155), with 34.9 % (n = 83) taking place at weekends (Friday-Sunday). More than half (52.5 % n = 125) attended within regular working hours (08:00–16:59), with 47.5 % (n = 113) attending during 'on-call' hours (17:00–07:59). Only a small proportion of those attended between midnight and 07:59 (5.9 %, n = 14). As regards the referral source, 51.3 % (n = 122) were self-referrals, 10.5 % (n = 25) were referred from the Dublin Rape Crisis Centre (DRCC), 6.7 % (n = 16) were from a General practitioner/family medicine doctor (GP), 4.6 % (n = 11) had presented directly to the police and 26.9 % (n = 64) were listed as 'other' e.g. emergency departments, other SATUs etc. Psychological support from the DRCC was available to 78.6 % (n = 187) of attendees – either in person (n = 183) or by telephone (n = 4). Language interpreting services were required for 1.3 % (n = 3) of cases. *4.1.3 Incident details* The assailant-victim/survivor relationship is shown in Table 2. The gender of the assailant was male in 92 % (n = 219) of cases, 0.4 % (n = 1) female and in the remainder the gender was not known or recorded. The location of the incident is shown in Table 3. In relation to the timing of the incident, 9.2 % (n = 22) occurred between 08:00–16:59, 21.4 % (n = 51) between 17:00 and 23:59 and 69.3 % (n = 165) between midnight and 07:59. The majority occurred at the weekend (Friday-Sunday) 64.7 % (n = 154).

Of those where alcohol and drug use were disclosed and recorded, 82.2 % (n = 189/230) had consumed alcohol and 20.9 % (n = 49/235) recreational drugs in the 24 h preceding the incident. Regarding a concern about a drug-facilitated sexual assault (DFSA), 20.2 % (n = 48) felt a DFSA had occurred, with a further 14.3 % (n = 34) being unsure.

Types of sexual assault and genital injury detail for female patients are described in Table 4 and for male patients in Table 5.

5.2. Comparison of reporters versus those who availed of a storage of evidence

Those that initially reported to the police ('Option 1') were significantly more likely to attend within 24 h of the incident occurring (58.4 % V 31.9 % RR1.149 CI 1.106–1.193 p < 0.001). Those that availed of storage of evidence ('Option 3') were significantly more likely to have disclosed alcohol use in the 24 h preceding the incident (82.8 % V 71.8 % RR1.755 CI 1.274–2.418 p < 0.001), to be assaulted indoors (87.4 % V 78.8 % RR 1.069 CI 1.031–1.109 p = 0.002) and to be assaulted in the assailant's home (35.7 % V 21.5 % RR1.829 CI 1.435–2.330 p < 0.001). There was more likely to be a duration of over 3 h between request for, and performance of, FE in the storage of evidence cases (24.1 % V 17.8 % RR1.356 CI 1.033–1.780 p = 0.032) compared with those who initially reported to the police, the most significant reason for this delay being the patient's own request (31.6 % V 11 % p = 0.034).

There was no significant difference in care option choice if the person was 'unsure' whether a sexual assault had occurred (p = 0.353), injury prevalence (genital or extra-genital) (p = 0.24) or concern for drug-facilitated sexual assault (DFSA) (p = 0.398). Victim/survivor-assailant relationship did not affect choice of care option, with

Table 2
The assailant-victim/survivor relationship for storage of evidence "option 3" attendances to the Dublin SATU.

	Total n = 244[a] (%)
Stranger	53 (21.7)
Acquaintance <24 h	49 (20.1)
Acquaintance >24 h	56 (23.0)
Person in authority	2 (1 %)
Friend	34 (13.9)
Ex-intimate partner	9 (3.7)
Intimate partner	8 (3.3)
Family member	4 (1.6)
Other	1 (<1 %)
Unknown	8 (3.3)
Missing/not recorded	20 (8.2)

[a] The total number of assailants does not equal the total number of attendances due to multiple assailant assaults.

Table 3
Location of assaults for storage of evidence “Option 3” attendances to the Dublin SATU from 2017 to 2023.

	Total = 238 (%)
Assailants Home	85 (35.7)
Own home	45 (18.9)
Other indoors	54 (22.7)
Field/park	6 (2.5)
Other outdoors	24 (10.1)
Taxi	3 (1.3)
Vehicle	8 (3.4)
Unsure	5 (2.1)
Other	4 (1.7)
Not recorded	4 (1.7)

Table 4
Type of sexual assault and genital injury information for female patients who availed of storage of evidence (“Option 3”).

	Total n = 212 (%)
Type of sexual assault[a]**:**	
Penile-vaginal penetration	137 (64.6)
Penile-anal penetration	26 (12.3)
Penile-oral penetration	40 (18.9)
Digital-vaginal penetration	71 (33.5)
Digital-anal penetration	13 (6.1)
Object-vaginal penetration	5 (2.4)
Unsure of type of penetration	67 (31.6)
Genital injury prevalence:	
Injury present	38 (17.9)
No injury	174 (82.1)
Location & type of genital injury[b]**:**	**Total = 38 (%)**
Vagina	
- Laceration	5 (13.2)
Posterior fourchette	
- Laceration	4 (10.5)
- Abrasion	3 (7.9)
Fossa navicularis	
- Laceration	2 (7.1)
- Abrasion	6 (15.8)
Labia minora	
- Laceration	7 (18.4)
- Abrasion	2 (5.3)
- Bruising/ecchymosis	2 (5.3)
Labia majora	
- Laceration	2 (5.3)
- Abrasion	2 (5.3)
Hymen	
- Abrasion	2 (5.3)
- Bruising/ecchymosis	1 (2.6)
Peri-anal	
- Laceration	2 (5.3)
- Abrasion	3 (7.9)
Perineum	
- Abrasion	2 (5.3)
- Bruising/ecchymosis	2 (5.3)
Clitoral hood	
- Abrasion	1 (2.6)
- Laceration	3 (7.9)

[a] The cumulative count of sexual assault types is different from the total number of patients due to instances where some victims/survivors have experienced multiple types of assault.
[b] The total number of specific genital injuries does equal the total number of patients with genital injury present due some patients sustaining more than one injury type.

disclosures where the assailant was described as a stranger/recent acquaintance less than 24 h did not increase the likelihood of reporting to the police (43.5 % V 45.4 % RR0.936 CI 0.694–1.26 p = 0.661) versus availing of a storage of evidence approach.

Table 5
Type of sexual assault and genital injury information for male patients who availed of storage of evidence (“Option 3”).

	Total n = 21 (%)
Type of sexual assault[a]**:**	
Receptive penile-anal penetration	7 (33.3)
Receptive penile-oral penetration	6 (28.6)
Receptive digital-anal penetration	3 (14.3)
Unsure of type of penetration	10 (47.6)
Genital injury prevalence:	
Injury present	4 (19.0)
No injury	17 (81.0)
Location & type of genital injury[b]**:**	**Total=4 (%)**
Peri-anal	
- Abrasion	2 (50.0)
Anal/Rectal	
- Laceration	2 (50.0)
Penis	
- Bruising/ecchymosis	1 (25.0)

[a] The cumulative count of sexual assault types is different from the total number of patients due to instances where some victims/survivors have experienced multiple types of assault.
[b] The total number of specific genital injuries does not equal the total number of patients with genital injury present due some patients sustaining more than one injury type.

5.3. Comparison of storage of evidence cases who subsequently reported to the police with those that did not report

In total 20.2 % (n = 48/238) of those who initially availed of a storage of evidence “Option 3” subsequently reported the crime to police during the study period. Fig. 1 25.0 % of these (n = 12/48) reported within 1 week, 48.0 % (n = 23/48) within 1 month and 70.1 % (n = 34/48) by 3 months. There was one person who reported after 1 year. Females were significantly more likely to report the crime compared to

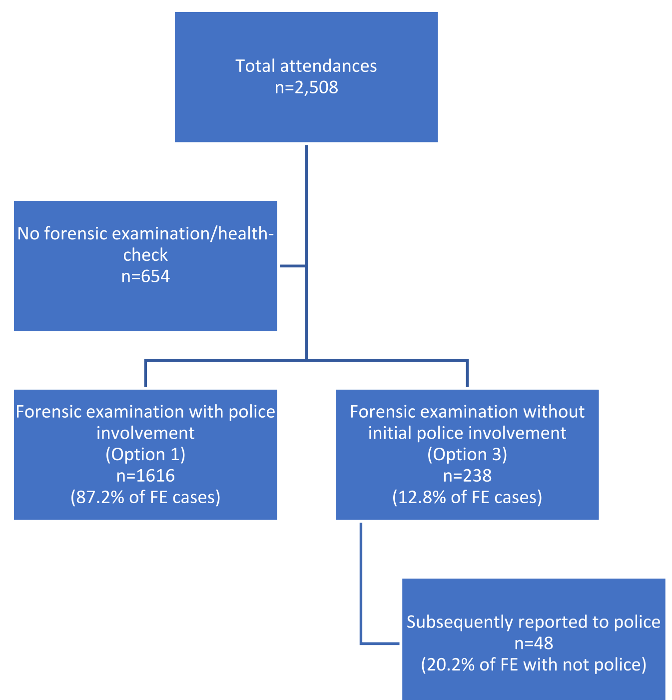

Fig. 1. Attendances to the Dublin SATU and reporting rates to police between 2017 and 2023.

other genders (22.2 % n = 47/212 V 3.8 % n = 1/26 RR 5.76 CI0.830–40.1 p = 0.028). Those that were unsure whether a sexual assault had occurred were significantly less likely to report (9.1 % n = 4/44 V 22.7 % n = 44/194 RR 0.401 CI0.152–1.057 p = 0.043). The presence of genital injury (p = 0.822), survivor/victim-assailant relationship (p = 0.465), location of the assault (p = 0.487) or drug (p = 0.051)/alcohol (p = 0.332) consumption did not significantly impact subsequent reporting rates.

6. Discussion

This study has shown that approximately 9.5 % of attendances to the Dublin SATU are by people who choose to access 'Option 3' storage of evidence, with 20 % of these subsequently reporting the crime to the police. We have identified that certain factors are associated with an increased likelihood of availing of storage of evidence rather than immediate reporting to the police, and certain factors increase likelihood of subsequent reporting to the police.

Firstly, our study has shown that the storage of evidence care option is being chosen by a sizeable proportion of people attending the Dublin SATU. Research suggests that medical examination after a sexual assault is a persons' primary concern with collection of forensic evidence a secondary consideration[3] and this option allows for both without the need for an immediate report to be made to the police. Before this care option was offered, individuals faced a binary decision regarding the collection of forensic evidence. While they could seek care at a SATU for various services, such as emergency contraception and treatment of injuries, if they wanted forensic samples taken, they were required to also report the crime to the police. However, because forensic evidence disappears from the body rapidly, some people felt pressured to decide quickly whether or not to report to the police. Consequently, some found that by the time they made the decision to report, the window for FE and evidence collection had closed. Although there is no statute of limitations on reporting sexual crime, this delay in reporting and the subsequent loss of forensic evidence could have been a real or potential barrier to successful prosecution.

Timely access to this care option is incredibly important, and this study has shown that there was no significant delay between the request been received and the examination being undertaken from a SATU availability perspective. However, we have shown that there were significantly fewer patients attending for 'Option 3' within 3 h of a request for examination, with the reason for the delay being cited as 'patient's request'. This highlights the difficulty a person may have in attending promptly, particularly in cases where they have not reported to the police and thus must negotiate their own transport and travel. This highlights the importance of providing this care option on a 24/7/365 basis and holistically supporting people to attend. It is encouraging to note that 20 % of individuals who have utilised the evidence storage care option have subsequently reported the crime to the police. This has facilitated the provision of potential DNA evidence to the police along with a comprehensive report aiding the criminal investigation. It's noteworthy that the proportion of subsequent reports has remained consistent since the initial study,[11] underscoring the importance of this care option. This represents a cohort of patients who may not have reported otherwise, potentially leading to the loss of vital evidence during the FE period. However, it is crucial to note that when there is a delay in reporting, certain types of evidence beyond the scope of a storage of evidence care option in a SATU may be lost. This includes the victim/-survivor's clothing, closed-circuit television recordings (CCTV), witness statements, and other forensic materials. It is essential for forensic examiners obtaining consent for a storage of evidence case to emphasise these limitations so that people can make informed decisions. Genital injury was present in a significant proportion (18.5 % overall, 19.0 % in men and 17.9 % in women) of people attending for storage of evidence FE. The most commonly injured location were the labia minora, with a laceration being the most common injury type. This prevalence of genital injury is lower than other studies have reported,[9] with some arguing that if an injury is not present, that the person may feel they are less likely to be believed.[12] However, analysis in this study has shown that the presence or absence of genital injury did not influence choice of care option or subsequent reporting rates. Despite this prevalence of genital injury, none of the attenders needed to be referred to an emergency room for treatment/management of a genital injury.

Regarding the demographics of those availing of storage of evidence, the vast majority are female, which is in keeping with a study previously conducted in the UK.[13] While many men are affected by sexual violence, it is primarily perpetrated against women and gender diverse individuals,[14,15] therefore this finding is not surprising. Despite this, it is important to highlight the availability of this care option to all genders, as it would potentially have the benefit of increasing disclosure rates and subsequent reporting rates for those minorities that are already less likely to report. Our study also highlights that individuals who initially reported the crime to the police were more inclined to attend SATU within the first 24 h compared with those opting for the storage of evidence care option. This underscores the potential uncertainty experienced by individuals choosing the evidence storage option, as they weigh their decision within the initial 24-h window following the incident. While we have emphasised the health benefits of seeking post-sexual assault care promptly after an event, it is important to stress that people still contemplating their options should be encouraged and supported to seek SATU care within the first 24 h. They can always return later if they decide to undergo a FE. Another interesting observation is that there was no significant distinction in the choice of care options among individuals who expressed uncertainty regarding whether a sexual assault had taken place. Previous research[16] has suggested that amnesia or lack of recollection of the assault might decrease the likelihood of reporting the crime. Our study has shown that initially this may not be the case as there was no difference in reporters versus storage of evidence cases as regards likelihood of reporting if they were 'unsure' if a sexual assault occurred. This trend is reassuring as it suggests that individuals who initially report are not deterred by their lack of precise recollection of the incident. However, we have shown that those who were 'unsure' a sexual assault occurred were significantly less likely to subsequently report the incident to the police, even when they had availed of storage of evidence. Hence, it is crucial for staff working within SATUs to reassure individuals that a complete recollection is not obligatory for making a report. The protocol used for storage of evidence cases in Ireland and the time for which samples are stored is similar to many units internationally, although the duration for sample storage varies among units.[17] The trend toward prolonged evidence storage is gaining traction, evidenced by several states in the United States extending storage durations, in some instances up to 20 years.[18] However, findings from this study suggest that people opting for storage of evidence "Option 3" are unlikely to report the crime more than three months after the assault. This raises questions regarding the cost of maintaining samples, especially if reporting rates significantly decrease after a certain period. This is worthy of ongoing review. Strengths and limitations: This study marks the first paper to compare the differences between those that choose a FE with police involvement versus those that do not, as well as comparing the factors that influence subsequent police reporting in people who have chosen to store forensic evidence in SATU. Another strength are the numbers included within the sample size which are greater than most other studies analysing this patient cohort. Regarding limitations, this is a retrospective study, based on a prospectively completed database with some individual chart review. There is also potential for selection bias towards victims/survivors attending SATUs, and the results of this study may not be transferable to all people who have been sexually assaulted. There is also the possibility of inter-forensic examiner variability in the recording of injuries, however, with a national clinical guideline and rigorous training, it is unlikely to have significance.

7. Conclusion

The findings of this study provide valuable insights into choice of care options post sexual assault, and subsequent decisions around police reporting. Those individuals initially opting for storage of evidence were more likely to disclose alcohol use and were more frequently assaulted indoors, suggesting potential patterns in assault circumstances. Importantly, 1 in 5 of those initially choosing storage of evidence subsequently reported the crime to the police, with women significantly more likely to report than men. Those who were unsure a sexual assault occurred were also significantly less likely to subsequently report the crime to the police.

Declaration of competing interest

None

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References

1. CSO. Sexual violence survey [Available from: https://www.cso.ie/en/releasesandpublications/ep/p-svsmr/sexualviolencesurvey2022mainresults/perpetratorofsexualviolence/; 2023.
2. Mc Gee H, Garavan R, De Barra M, Byrne J, Conroy R. *The SAVI Report: Sexual Abuse and Violence in Ireland*. 2002.
3. Heffron LC, Busch-Armendariz NB, Vohra SS, Johnson RJ, Camp V. Original research: giving sexual assault survivors time to decide: an exploration of the use and effects of the nonreport option. *Am J Nurs*. 2014;114(3):26–35. ; quiz 6, 49.
4. Nesvold H, Friis S, Ormstad K. Sexual assault centers: attendance rates, and differences between early and late presenting cases. *Acta Obstet Gynecol Scand*. 2008;87(7):707–715.
5. Goodman-Williams R, Volz J, Fishwick K. Reasons for not reporting among sexual assault survivors who seek medical forensic exams: a qualitative analysis. *J Interpers Violence*. 2023, 8862605231211926.
6. Patterson D, Greeson M, Campbell R. Understanding rape survivors' decisions not to seek help from formal social systems. *Health Soc Work*. 2009;34(2):127–136.
7. Wolitzky-Taylor KB, Resnick HS, McCauley JL, Amstadter AB, Kilpatrick DG, Ruggiero KJ. Is reporting of rape on the rise? A comparison of women with reported versus unreported rape experiences in the National Women's Study-Replication. *J Interpers Violence*. 2011;26(4):807–832.
8. Kane D, Holmes A, Eogan M. Post-exposure prophylaxis, STI testing and factors associated with follow-up attendance: a review of 4159 cases of acute post-sexual assault medical care. *Sex Transm Infect*. 2024;100(1):39–44.
9. Kane D, Kennedy KM, Eogan M. *The Prevalence of Genital Injuries in Post-pubertal Females Presenting for Forensic Examination after Reported Sexual Violence: A Systematic Review*. International Journal of Legal Medicine; 2023.
10. Team SAR. *National Guidelines on Referral and Forensic Clinical Examination Following Rape and Sexual Assault (Ireland)*. fifth ed. 2023.
11. Kane D, Pucillo C, Maher N, Eogan M. Collection and storage of forensic evidence to enable subsequent reporting of a sexual crime to the police "Option 3"-an Irish experience. *Ir J Med Sci*. 2021;190(4):1591–1596.
12. Walker G. The (in)significance of genital injury in rape and sexual assault. *Journal of Forensic and Legal Medicine*. 2015;34:173–178.
13. Mattison MLA, Majeed-Ariss R, White C. Clients who self-refer to a Sexual Assault Referral Centre (SARC): a preliminary exploration of client and case characteristics. *Psychol Crime Law*. 2023;29(5):514–530.
14. Wirtz AL, Poteat TC, Malik M, Glass N. Gender-based violence against transgender people in the United States: a call for research and programming. *Trauma Violence Abuse*. 2020;21(2):227–241.
15. Planty M, Langton L, Krebs C, Berzofsky M, Smiley-McDonald H. *Female Victims of Sexual Violence, 1994-2010: US Department of Justice*. Office of Justice Programs, Bureau of Justice; 2013.
16. Stokbæk S, Kristensen CL, Astrup BS. Police reporting in cases of sexual assault - a 10-year study of reported cases, unreported cases, and cases with delayed reporting. *Forensic Sci Med Pathol*. 2021;17(3):395–402.
17. Medicine FoFL. SARC storage of forensic samples & the human tissue act: frequently asked questions. *wwwfflmacuk*. 2016.
18. *Bill of Rights for Sexual Assault Victims, New York Statute Senate, 2017-2018 Sess*. 2018.