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To be Used or Not to be Used, that is the Question: Legal Use of Forensic and Clinical Information Collected in a Self-referral Sexual Assault Centre*

ABSTRACT: This study explores how the police select cases for using information from a self-referral Sexual Assault Centre (SAC). The study is retrospective and descriptive: a 2-year series from a Scandinavian SAC and corresponding police files. The police had access to 163 SAC cases, requested 84% of available forensic medical documentation, and had 50% of the trace samples analyzed. The two main predictors of police utilization of forensic evidence were cases the police classified as rape and complaints filed during January to August. Extrinsic DNA was found in 27/60 trace evidence analyses, 21 matching a suspect. For one-third of the suspects who denied sexual acts, the forensic evidence contradicted their denial. Nonuse forfeited this possibility in several cases, and relevant information on injuries was lost. Our results indicate that available medical information is not fully utilized for legal purposes. Main barriers are police classification of cases and insufficient economic funding.

KEYWORDS: forensic science, sex offenses, rape, police, forensic medicine, DNA, Scandinavia

Self-referral Sexual Assault Centres (SACs) provide counseling, medical help, and standardized forensic medical examination (FME) irrespective of police involvement. Legal use of SAC information is limited by victims' choice not to involve the police as SACs' reporting rates vary from 50 to 84% (1–4). However, even in reported cases, the police do not make use of all the available evidence (5–7). Little is known about how the police select cases for requesting medical information, how medical casework quantitatively contributes to crime investigation, and what might be lost by the selection. In jurisdictions where the police request FME from a forensic institute, the selection occurs prior to arrival and is not seen.

Several studies have evaluated medical forensic casework against legal outcome. However, other investigative information is seldom included and the results show inconsistent associations with injuries, reported violence, age of the victim, and victim/offender relationship (5,6,8–14). As the legal system has been criticized for attrition and suboptimal investigation (14,15), medical information should rather be assessed according to optimal use and practical contributions:

- Documentation of coercion and sexual contact.
- Trace evidence analyses for identification and linking of suspect to complainant.

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- Documentation of long-term psychosocial consequences for criminal injuries compensation.

This study describes the police's use of SAC casework in a 2-year series from a Scandinavian SAC. The center receives victims of both genders ≥ 14 years. Attending patterns and police-reporting practices have previously been described (16).

The main aims of the study are the following:

- To identify cases where SAC information was available to the police and police.
- Classification of these cases.
- To identify factors predicting police request for:
 - forensic medical documentation;
 - analysis of trace evidence.
- To explore the practical contribution of casework with respect to a, b, and c above and the loss caused by available data not being used.

Material and Methods

The study was based on retrospective data from cases presented in 1996 and 1999 at the SAC in Oslo, Norway, and from corresponding police files. The study was approved by the National Data Inspectorate, the Regional Research Ethics Committee, and the Committee for Confidentiality and Research. This SAC is located in Oslo's main outpatient emergency ward, the medical staff is trained in forensic procedures, and social counselors provide crisis intervention. The center does not apply strict time limits for consulting, and all services are free of charge. The costs are met by the health institution, supported by national health insurance (medical help/treatment) and the police (a fee when forensic medical documentation is requested).

The years 1996 and 1999 were chosen because reliable and detailed data for these years were already available. Other aspects

TABLE 1—Relationship between Sexual Assault Centre (SAC) case profiles and the police request for forensic documentation and trace evidence analysis. Cases seen at SAC separated into subgroups where forensic documentation and trace evidence are available to the police. Cases where the police have made requests are shown for both groups.

	Forensic Cohort									
	Clinical Forensic Documentation					Trace Evidence				
	Performed		Requested by Police			Secured		Analysis Requested		
	<i>n</i>	% Within Cohort	<i>n</i>	% Within Row	<i>p</i>	<i>n</i>	% Within Cohort	<i>n</i>	% Within Row	<i>p</i>
	134		112	83.6		118		60	50.8	
Complainant										
Age <20 years	29	21.6	26	19.7		27	22.9	19	70.4	*
Age ≥20 years	105	78.4	86	81.9		91	77.1	41	45.1	
Males	10	7.5	7	70.0		9	7.6	2	22.2	0.09
Previously sexually assaulted	47	35.1	37	78.7		40	33.9	25	62.5	0.07
Addiction problem	24	17.9	17	70.8	0.07F	22	18.6	9	40.9	
Vulnerability not known	65	48.5	56	86.2		56	47.5	28	50.0	
Sexual acts [†]										
Penetrated	96	71.6	84	87.5		92	78.0	47	51.1	
Not penetrated	21	15.7	13	61.9	**	10	8.5	2	20.0	*
Suspected assault/vague	17	12.7	15	88.3		16	13.6	11	68.8	
Coercion [†]										
Violence exceeding holding	62	46.3	53	85.5		53	44.9	25	47.2	
Threats, pressure	7	5.2	5	71.4		7	5.9	1	14.3	*
Holding	37	27.6	31	83.8		34	28.8	22	64.7	
Sleep/intoxication	26	19.4	22	84.6		22	18.6	12	54.5	
Vague explanation/no info	2	1.5	1	50.0		2	1.7	0	0.0	
Perpetrator [†]										
Single	113	84.3	93	82.3		97	82.2	49	50.5	
Multiple	20	14.9	18	90.0		20	16.9	11	55.0	
Unable to tell	1	0.7	1	100.0		1	0.8	0	0.0	
Unknown/known ≤24 h	75	55.9	59	78.7		66	55.9	33	50.0	
Known	46	34.3	41	89.1		40	33.9	19	47.5	
Partner/ex-partner	13	9.7	12	92.3		12	10.2	8	66.7	
Site of assault [†]										
Outdoor, car, other neutral	48	35.8	38	79.2		42	35.6	26	61.9	
Complainant's area	37	27.6	31	83.8		30	25.4	17	56.7	
Perpetrator's area	48	35.8	42	87.5		45	38.1	16	35.6	**
No info	1	0.7	1	100.0		1	0.8	1	100.0	
Induced intoxication	26		24	92.3		23		10	43.5	
<i>n</i> [‡]	120					107				
Interval to examination										
Examined <24 h	97	72.4	83	85.6		89	75.4	50	56.2	
Examined 1–3 days	17	12.7	14	82.4		15	12.7	8	53.3	
Examined >3 days	20	14.9	15	75		14	11.9	2	14.3	**
FME results										
No/minimal injuries	48	35.8	37	77.1		40	33.9	17	42.5	
Only extragenital injuries	35	26.1	30	85.7		28	23.7	16	57.1	
Only anogenital injuries	27	20.1	22	81.5		26	22.0	15	57.7	
Extragenital and anogenital injuries	24	17.9	23	95.8	0.07	24	20.3	12	50.0	
Medical examination	134	100	112	83.6		118	100	60	50.8	

Significance is calculated using chi-square or Fisher exact test (*F*), comparing requests for documentation/analysis in cases displaying each particular feature versus requests in all cases known not to display this feature. *p*-Values >0.10 are not shown.

p* ≤ 0.05, *p* ≤ 0.01.

[†]According to complainants' descriptions.

[‡]*n* is specified as cases with no such information are excluded from the chi-square calculation.

FME, forensic medical examination.

of the cases have been described previously (1,16), and the first author was familiar with most of these cases through her clinical work, which facilitated obtaining permission to collect and combine sensitive data from medical and police records. Furthermore, the police files were only available for review in legally complete cases. This SAC does not have the resources for continuous registration at this level. Later annual reports from the center have been consistent regarding case profiles, although the number of cases has increased from 210 ± 15 since 1999 to c. 300 since 2007; the population has increased by 15%. Nowadays, the police seem to collect

more of SAC's total documentation (121/354 [34%] in the present series vs. 131/296 [44%] in 2008), but still all available information is not collected, and much trace evidence from reported cases is left behind at the SAC. The two included years are considered suitable for the purpose, that is, to establish an overview of police's utilization practices and to act as a baseline for further research.

Data regarding medical, forensic, and counseling casework were retrieved from standardized SAC records. Variables with respect to assaults were based on complainants' descriptions, categories are shown in Tables 1 and 2, and more descriptions have been given

in a previous article (16). Some variables/categories in this study need further comments:

- Complainants were registered by gender and age, whether the complainant had been sexually assaulted previously (as a child, adolescent, or adult), or had been identified in the emergency ward as a heavy drug/alcohol abuser. Complainants with none of these features and without signs of psychosis or serious disease/handicap were categorized as *vulnerability not known*. As the vast majority of complainants were Norwegians, ethnicity has not been presented.
- Type of sexual assault was categorized according to the most serious act: penetration of body orifice with penis/object, non-penetrative assault, strong suspicion of assault, for example, during sleep/intoxication/amnesia and *vague* cases where the description/suspicion of the assault is less clearly founded.
- Coercion: assaults consisting of several acts of coercion were coded according to the one most likely to result in bodily harm.
- Site of assault: victim's and perpetrator's areas include home, office, or hotel room. Car, outdoors, and other neutral areas were merged for this study.
- Forensic examinations: recorded extragenital and anogenital injuries. Extragenital injuries were registered when comprising concussion/sprain/fracture, wounds, or more than five bruises. A few minor bruises were coded as *no/minimal injuries*, as such findings are less relevant as evidence. Toxicological analyses were not included for evaluation in this study.

We also recorded trace evidence samples collected at FME and SAC documentation sent to the police on request, for example, information from FME, medical/counseling/follow-up, and expert evaluations.

SAC cases registered with the Norwegian police were traced through national (STRASAK) and local police registers. All are assumed identified. Core information was collected from STRASAK. Retrievable police files were reviewed by the first author. The files included interrogations, technical reports, and court verdicts.

The following data were collected:

- Police classification of reported assaults.
- Police identification of suspect(s).
- Police interrogation of suspect(s)—whether the suspect admitted main sexual acts in accordance with the complainant's statement.
- Police request for analysis of FME trace evidence. Results were coded according to the strongest evidential outcome in the case (extrinsic DNA > sperm > acid phosphatase).
- Complainants' withdrawal of consent to investigation.
- Police collection of medical/therapeutic documentation from outside the SAC.

One complainant was seen after two separate assaults, and three cases were linked by the same perpetrator. All these assaults are included, the cases thus linked are few and unlikely to affect the statistical analyses, and we wanted to explore how available SAC casework was used by the police. For the same reason, and as the differences were minimal, cases have not been separated by gender or year of inclusion (16) Although sexual assaults are gender-related crimes, there were too few men in our series for these cases to be analyzed separately.

The words *complainant and victim* are used synonymously to denote an individual alleging an incident of sexual violence against her/him, likewise *perpetrator/accused/suspect*, a person accused (by a victim or the police) of having committed a sexual assault. According to Norwegian law, *rape* includes penetration of penis/object/finger in vagina/anus, penis in mouth, masturbation, and coercion by force, threats, or during impaired consciousness. *Forensic cohort* comprises the cases where FME had been performed, and information was available to the police. *Trace evidence subgroup*: those within forensic cohort where FME included collection of trace evidence. *Nonforensic cohort*: cases where FME had not been performed. *Tertial of complaint* refers to the 4-month period of the year in which the complaint was filed (1: January–April, 2: May–August, 3: September–December). The first two tertials were later merged, as the results were similar.

TABLE 2—Police casework and request for forensic documentation and trace evidence analysis. Cases seen at Sexual Assault Centre separated into subgroups where forensic documentation and trace evidence are available to the police. Cases where police have made requests are shown for both groups.

	Forensic Cohort									
	Clinical Forensic Documentation					Trace Evidence				
	Performed		Requested by Police			Secured		Analysis Requested		
	<i>n</i>	% Within Cohort	<i>n</i>	% Within Row	<i>p</i>	<i>n</i>	% Within Cohort	<i>n</i>	% Within Row	<i>p</i>
	134		112	83.6		118		60	50.8	
Reporting codes										
Rape	108	80.6	98	90.7	***	103	87.3	57	55.3	**
Other than rape	26	19.4	14	53.8		15	12.7	3	20.0	
Time of the year for report										
January–August	88	65.7	79	89.8		80	67.8	50	62.5	
September–December	46	34.3	33	71.7	**	28	32.2	10	35.7	***
Perpetrator identified										
Yes	96	71.6	83	86.5		84	71.1	39	46.4	
No	38	28.4	29	76.3		34	28.9	21	61.8	
Suspect confessed (<i>n</i>)	89					78				
No	27	30.3	21	77.8		22	28.2	7	31.8	
Yes	62	69.7	58	93.5	0.06	56	71.8	31	55.4	

Significance is calculated using chi-square or Fisher exact test (*F*). *p*-Values >0.10 are not shown.

p* ≤ 0.01, *p* ≤ 0.001.

Statistics

Differences in distribution were evaluated using a chi-square test. Unadjusted and adjusted odds ratios were estimated using binary logistic regression. Collected FME documentation and performed trace analyses were defined as dependent variables in the *forensic cohort* and in the *trace evidence subgroup*, and separate regression analyses were performed in these two cohorts. The independent polytomous variables of assault characteristics were coded using the “classic rape” features as a reference (penetrating assault, violent coercion, perpetrator one single stranger). This decision is based on documentation of classic rapes as being the most readily accepted, both by society and by police (17–20), and we wanted to explore how the more common, nonstereotypic assaults were handled in comparison. Age was unrelated to collection of FME documentation and was not included in this regression. Age and trace analysis showed a nonlinear relationship, but an overall decline with increasing age. This sample was split into two age groups: younger than 20 versus 20 years and older. Univariate significant variables were stepwise entered into forward multiple regression analyses. Owing to small numbers, the regression analyses were restricted to few variables, selected according to clinical judgment. The final models were tested for goodness of fit. SPSS version 11 was used (SPSS Inc., Chicago, IL).

Results

A total of 177 cases presenting at the SAC were registered with the Norwegian police. In 14 cases, complaints were withdrawn before consent to release information was given, or investigation had been closed before the complainants arrived at the SAC. Thus, SAC information was available to the police in 163 cases.

In the *forensic cohort*, where FME was performed, the police collected FME documentation in 112/134 cases (84%), and in the *trace evidence subgroup*, the police requested analyses of 60/118 (51%) sets of trace samples. In the *nonforensic cohort*, the police requested SAC records for 9/29 (31%) cases. Among all the 163 available cases, no information was collected for 42 cases (26%).

Police classification of cases was somewhat inconsistent with complainants’ descriptions of sexual acts as given at the SAC (Table 3), for example, in one-third of the cases not classified as rape, penetrative assault had been explicitly described or was strongly suspected by the complainant.

Tables 1 and 2 describe the forensic cohort: characteristics of complainants, assaults, use of SAC services, and police casework related to request for information/analysis.

The odds for the police requesting FME documentation and trace evidence analysis are shown in Tables 4 and 5. Two variables were strongly related to the odds for requesting FME documentation and for trace evidence analysis: Cases reported within the first 8 months of a year and cases coded as rape showed significantly increased odds. On the other hand, the odds for requesting FME documentation were lower if the complainant had an addiction problem, and for trace evidence analysis, if the complainant was ≥20 years and if the assault had occurred in the perpetrator’s area.

The non-FME cohort was too small for statistical analysis, but documentation was requested only in cases coded as rape, and eight of nine alleged perpetrators were known by the complainants. Omission of FME was because of the complainant’s reluctance in nine cases and late arrival in the rest.

Police collected 53/59 (90%) FME records documenting significant extragenital injuries and 45/51 (88%) records of anogenital injuries. Additional interpretation of the injuries by a medical expert had been requested in only one case.

TABLE 3—Police classification of cases compared with Sexual Assault Centre’s (SAC’s) information. The police classification is presented as text. As the classification appears in code numbers in the national police registers, the codes are also shown. SAC’s information is derived from complainants’ descriptions of the assault when attending SAC.

Police Classification	SAC Description				Total
	Penetrating Assault	Non Penetrating	Suspected Assault*	Vague Description†	
Rape					
1401,1420,1416	108	7	14	2	131
Sexual act with child younger than 16 years					
1402,1403,1418	3	1			4
Exploitation of position, indecency					
1412,1419,1499	3	4			7
Attempted rape					
1413		8	1		9
Bodily harm, threats					
1701,1703,1716, 1601,2502	1	5			6
Self-inflicted injury					
9708				1	1
Preliminary‡					
9750,9799	2	2	1		5
Total	117	27	16	3	163

*Suspected assaults include cases where the complainant presents a well-founded suspicion, for example, waking up naked with a stranger.

†Vague cases refer to vaguely described situations, for example, owing to complainant’s mental disability, or far-fetched, delusional explanations.

‡The police may use this code temporarily in the initial phase and permanently if the complainant does not agree to further investigation.

TABLE 4—Unadjusted and adjusted odds for request for forensic documentation. A forward logistic regression is presented, “forensic documentation requested” being used as the dependent variable. Unadjusted and adjusted odds ratios (OR) with 95% confidence intervals of OR are shown, significant values in bold.

	Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI
Complainant, addiction problem	0.4	0.1–1.1	0.3	0.1–0.9
Sexual acts				
Penetrated	(ref)			
Not penetrated	0.2	0.1–0.7		
Suspected assault/ vague	1.1	0.2–5.3		
Reporting code				
Other than rape	(ref)		***	
Rape	8.4	3.1–23.0	11.1	3.5–34.9
Time of year reported				
September–December	(ref)			**
January–August	3.5	1.3–8.9	4.2	1.4–12.5

Because of low numbers of not collected documentation, only two independent variables were entered at the time. Alleged sexual acts and police coding were first entered, the latter presiding, then tertial of year. Adding addiction did not alter the significance of the former, but only slightly increased their odds (from 9.3 and 4.0).

Hosmer and Lemeshow test goodness of fit was 0.708.

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

Trace evidence analyses were positive in 42/60 (70%) cases: acid phosphatase (four cases), microscopically visible spermatozoa (11 cases), or extrinsic DNA (27 cases), the latter mainly extracted from spermatozoa. All positive samples had been collected within

TABLE 5—Unadjusted and adjusted odds for analyzing forensic samples. A forward logistic regression is presented, “trace evidence analysis requested” as the dependent variable. Unadjusted and adjusted odds ratios (OR) with 95% confidence intervals of OR are shown, significant values in bold.

	Unadjusted		Adjusted	
	OR	95% CI	OR	95% CI
Complainant's age				
Age ≥20	ref		*	
Age <20	2.9	1.2–7.3	6.9	2.1–22.8
Previous sexual abuse	2.0	0.9–4.5		
Sexual acts				
Penetrated	ref			
Not penetrated	0.2	0.05–1.2		
Suspected assault/vague	2.1	0.7–6.5		
Site of assault				
Outdoor, car, neutral, no information	ref		*	
Complainant's area	0.7	0.3–2.0	0.7	0.2–2.0
Perpetrator's area	0.3	0.1–0.8	0.2	0.1–0.5
Interval to examination				
Later than 3 days	ref			
Within 3 days	7.6	1.6–35.5		
Reporting code				
Other than rape	ref		*	
Rape	5.0	1.3–18.6	6.3	1.4–28.5
Time of year reported				
September–December	ref		***	
January–August	4.7	2.0–11.0	6.7	2.4–18.3

Because of a low number of included cases, only a limited number of variables could be entered into the analyses.

Interval to examination was not included, as the possibilities for positive results always decrease as the time intervals increase, thus the influence on selection for analyzing can be foreseen. Police coding of the case was initially left out as this was also an expected predictor to request of analysis. However, reentering this variable did not affect the other results.

Hosmer and Lemeshow test goodness of fit was 0.793.

* $p \leq 0.05$, *** $p \leq 0.001$.

36 h. Among samples collected within 24 h, 80% tested positive, and as two-thirds of the nonanalyzed samples were first-day samples, these might also have provided reliable results.

Police investigation identified 41 initially unknown perpetrators. Eight identities were confirmed by DNA analysis of forensic samples from the complainant. The DNA profiles matched a suspect in 21 cases.

The complainants' descriptions of sexual contact were supported by positive analyses and/or anogenital injury in 68/112 (61%) of the cases where the police collected SAC information. Interrogated suspects denied sexual contact in 27 cases, nine of these could be contradicted by such medical evidence. In 15 more cases, where the suspect denied the sexual acts, the chance to refute the claim was forfeited, as available trace evidence was omitted from analysis.

Documentation of postassault psychosocial consequences was present in 74 (45%) of the police files, irrespective of cohort, mostly as a short addendum included in the medical documents at SAC's initiative. Information less readily available, for example, from external psycho-medico-social sources, had been collected in 39 (24%) available cases. Detailed descriptions allowing for evaluation of sequelae were virtually absent.

Discussion

There is a substantial loss of accessible information from SAC to the police. This raises the question of the optimal use of medical

evidence. In these series, 26% of the total available information, 16% of the FME documentation, and 50% of the biological samples are ignored.

Similarly, forensic kits/statements are not collected in 24–35% of reported cases in Canada and Sweden (7,9), and we assume that corresponding selection processes may occur in systems where the FMEs are solely police-initiated, for example, prior to requesting physical examination at a forensic institute.

These series disclose two major predictors regarding legal utilization of forensic documentation and trace evidence analyses: police classification of the case and time of year for the complaint.

The preference of the police for legal utilization of documentation in cases coded as rape is probably related to perceived seriousness and a stronger tradition for requesting FME/sample analysis in such rape cases. However, the police classification and the assault descriptions given at SAC quite often diverge. Some complainants did not explicitly inform the police of the sexual aspects of the assault, or the police ignored the forced sex in cases of domestic violence. Some assaults allow for several classifications, for example, waking up by being fingered genitally, which may be considered as indecent touching, attempted rape, suspected rape during sleep, or masturbation/digital penetration, which is included in the Norwegian definition of rape. Several such examples were seen. On the other hand, the police classified some cases as rape that was described as nonpenetrative or vague at the SAC.

Taking into account the coding inconsistencies and the perceived seriousness of cases not coded as rape, selection according to code seems unjustified. Furthermore, serial perpetrators may commit various assaults (21), and methods in trace evidence analysis are continuously being refined, expanding the indications for sampling as well as for analysis.

The negative impact of filing a complaint at the end of the year seems to be due to fiscal factors: reported assaults show no such seasonal pattern. In Norway, the local police district pays for all requested forensic services and at the end of the year funds are dwindling. When SACs are not compensated for unused FME casework, these costs are carried by the health institution housing the SAC and may become a burden when reporting rates are low. Fiscal reforms are necessary, in our country presently being implemented regarding trace evidence analysis, but not FME documentation or expert statements. Economy probably influences investigation and SAC activity in other countries and should be further explored. In the U.S.A., the scarcity of funding has caused an enormous backlog of nonanalyzed samples (22).

Characteristics of complainants were mostly unrelated to police utilization of SAC work. We found only two exceptions: age and abuse of alcohol or drugs. The odds for analysis increased in cases involving young persons and the odds for document collection decreased if the complainant was an alcohol/drug addict. This might possibly reflect an influence from perceptions of “worthy victims,” a concern in previous literature (9,19). In cases where the complainant is an alcohol or drug addict, the chances of a perpetrator being prosecuted may seem poorer, which may contribute to reduced investigative efforts (17,23). Yet, alcohol and drug addicts are definitely at risk of sexual abuse (24,25), and their cases deserve a proper assessment.

Trace material from male complainants seemed less often analyzed (Table 1), but larger series are needed for further exploration.

In cases where no forensic medical evidence was available (the nonforensic cohort), other medical information was mainly requested in cases where a named suspect was facing a rape charge. Interaction analyses in the forensic cohort also suggested that more efforts are made when a perpetrator is identified (the

odds for request of documentation increased severalfold, but confidence intervals were very wide, data not shown).

According to SAC experience, complainants and the public expect medical evidence to be used as a routine. As police investigation is an important fundament for later criminal injuries compensation, victims should be entitled to have their cases fully documented even when no perpetrator is identified, according to obligations following international conventions on victims' rights (17,26–28).

Practical Use

In these series, the police collected most FME records documenting physical injuries that might corroborate coercion/sexual contact. However, the potential is not fully utilized when half of the noncollected records describe injuries and when interpretative expert statements on topics of importance are not requested. The evidence may be misinterpreted (11), for example, a judge stating that no intercourse had occurred as the hymen was described as intact.

Prevalence of DNA analysis and positive results seem high for the time, other centers reporting <10% of the samples being analyzed (5,11,20). Today, we expect more analyses to be performed because of improved techniques and DNA registers that enhance the possibilities for identification. Such registers were not established at the time, and the police had to have a suspect for comparison prior to the analysis.

Few studies combine FME casework and DNA results, but DNA profiles linking complainant and suspect were found in 14% of cases subjected to forensic examination and crime investigation in Denmark (6). In the present series, matching DNA was found in 16% of the cases in the forensic cohort.

Documentation of complainants' demeanor at the SAC visit and postassault sequelae constitute circumstantial evidence, which is valuable in sexual assault cases, as physical injuries are often minor or absent and the main legal controversy is mutual consent, not the sexual acts per se. Demeanor is also possible to document in cases without FME. Such documentation is recommended by the Norwegian legal authorities (28,29), although the impact of this documentation has scarcely been studied (10,14). In the present series, documentation of postassault consequences was collected to a much lesser extent than FME records, but was referred to often as somatic forensic medical statements in the verdicts (unpublished data).

Strengths and Limitations

A strength of this study is the exploration of how the police select cases for use of FME/medical evidence and the gains and losses thereby, which to our knowledge have not been investigated before. The results are useful for suggesting improvements. Furthermore, the data on use of casework and DNA profiling illustrate how SAC casework may contribute practically to investigation.

Limitations reside in the retrograde design, the time elapsed, and the use of data collected from practical work files, which result in variations in available information. A prospective study is difficult to perform, as cases under investigation are unavailable for review. As for the age of the data, principal considerations regarding attrition and legal use of SAC/FME casework remain valid and the data constitute a suitable baseline for further studies. We assume that similar selection processes occur in several jurisdictions and should be taken into account when trying to establish the impact of forensic medical work on legal outcome (14). Replicate studies for establishing practice elsewhere and monitoring trends should be

performed. At our center, we do not know whether collection/analysing rates actually have increased. Current reforms regarding funding of analyses need evaluation, and although the police now pay more attention to complainants' psychosocial condition, the use of such information remains incompletely explored.

Conclusion

The attrition of information from SAC to the police is considerable. Available FME information is requested in 84% of the cases, half of the trace evidence samples are analyzed, and other SAC information is collected in only one-third of the cases where no FME has been performed. These rates are not optimal, as useful evidence may be disregarded. Cases categorized by the police as rape, and complaints filed during the first two-thirds of the year are selected for request of medical evidence. Reforms are necessary, as complainants of serious crimes are entitled to thorough medical assessment, including documentation of sequelae. All forensic work need sufficient funding to avoid economically determined nonuse and selection according to coding, and identification of perpetrators should be abandoned.

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