

**PAPER****GENERAL**

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## Sexual Assault Centres and Police Reporting— An Important Arena for Medical/Legal Interaction\*

**ABSTRACT:** This study explores the usefulness of forensic medical examination (FME) irrespective of police request and police-reporting practices at a self-referral Sexual Assault Centre (SAC). The study is retrospective, descriptive: a 2-year series of cases from a Scandinavian SAC and corresponding police files. Among 354 SAC cases, 180 were reported to the police, comprising 103 of 197 total rapes registered in this police district. Of 278 complainants presenting in time for FME, 55% reported to the police. FME was performed in 238 cases, 142 of these registered by the police. In 24% of the latter, examination preceded reporting by  $\geq 2$  days. Thus, substantial amounts of SAC casework remain unavailable to the police owing to nonreporting. However, performing FME regardless of reporting considerably increases the amount of information available to the police in late-reported cases. Although several factors predict reporting, the predictive power is insufficient for performing FME selectively.

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

Rape and other sexual assaults are underreported crimes, entailing serious health risks (1). In several countries, self-referral Sexual Assault Centres (SACs) have been established to provide assistance and standardized forensic medical examination (FME) irrespective of police involvement at arrival to facilitate reporting at a later date. The value of offering FMEs to all attendees has been questioned, as SACs may experience police-reporting rates as low as 50–60% (2–4). Meticulous documentation and trace evidence sampling serve no purpose in treatment, require costly competence, and are often difficult for those examined (5,6). Thus, some centers restrict FME to those who are likely to report (6,7). Few studies have evaluated the benefit to the police of self-referral when police involvement is delayed and FME has already been performed (6).

The self-referral centers may also provide information about complainants' reporting practices and the interactions between complainants, SACs, and the police, which is important to facilitate reporting and improve coordinated service delivery. As legal collection of SAC information is limited, we ought to clarify to what extent these limitations reside in attendees' choice not to involve the police or in the police's choice not to make use of available information.

Staff of SACs' knowledge of police involvement is often based on information from complainants and registration of requests from the police for SAC documentation, or police escort of attendees.

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These figures on reporting are likely to be incomplete, as the police do not request all available documentation (8), and contain no information about case logistics. Moreover, victims of sexual assault may report to the police without being referred to an SAC (8–10).

Reliable identification of SAC cases that have been registered by the police and information about the flow of cases between the police and SACs are necessary to explore police-reporting practices, to assess the benefits of self-referral for FME, and to understand how sexual assault evidence escapes the legal system. So far, SAC-based studies of police reporting have identified several influencing factors, such as age, perpetrator characteristics, method of coercion, physical injuries, and the victims' socioeconomic status (2–4,11).

This study presents a 2-year series of cases seen at an urban, self-referral SAC serving victims  $\geq 14$  years in a defined catchment area. Complete police files for reported cases were available for review.

The main aims of the study were to identify SAC cases registered with the police and the number of cases lost to the legal system owing to nonreporting or withdrawal of complaints, to identify predictors of reporting that may aid selective performance of FME, and to assess the forensic benefit of self-referral, according to the percentage of FMEs performed 2 days or more before reporting. The results are relevant for discussing how to organize forensic services for victims of sexual assault.

### Materials and Methods

The study was based on retrospective data from cases seen in 1996 and 1999 at the Sexual Assault Centre in Oslo, Norway, and from corresponding police files. The study was approved by the Norwegian Data Inspectorate, the Regional Research Ethics Committee, and the Committee for Confidentiality and Research. This center serves the entire Oslo population (c. 500,000). Attendance patterns have been described in a previous paper (12). The center provides counseling and medical follow-up, and FME to those

attending in time (within 1 week). The center is located in an outpatient emergency ward and is defined as a health service. All services are free of charge, the costs of treatment being met by the health institution supported by national health insurance. The police pay a fee when they request medical information. All information about clients is confidential and cannot be disclosed without their consent. Police may be involved before, during, or after SAC consultation, or not at all.

The years 1996 and 1999 were chosen because reliable and detailed data for these years were already available and had been used for other purposes (3,12). This SAC does not have the resources for continuous data collection at this level. The first author was familiar with most cases through her clinical work, and this facilitated obtaining permission to collect and combine sensitive information from medical and police records. Later annual reports from the center have been consistent regarding case profiles

and the recognized level of police involvement, which has remained at c. 50%, although the number of cases has increased (see Strengths and Limitations). We consider the included years suitable for the purpose, to establish an overview of reporting practices and a baseline for future studies.

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 have been described in more detail in a previous paper (12). Victim vulnerability comprises the following categories: *previous sexual assault* including incest and childhood assault; *serious disease/disability*, that is physical or intellectual impairment, including conditions like paralyzing neurological disease, HIV, and deafness; and *addiction* denoting heavy alcohol/substance abuse documented in prior medical records from the emergency ward.

TABLE 1—Case profiles and registration with police in the early and late cohorts. Total number of cases seen at Sexual Assault Centre separated into early and late cohorts—those arriving within a week, in time for forensic examination and those arriving later, respectively. Cases registered with the police are shown for both cohorts.

	Early Cohort							Late Cohort				
	Total		Early, Total		Reported			Late, Total		Reported		
	<i>n</i>	% Within Total	<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>
	354		278	100	154	55.4		76	100	26	34.2	
Complainant <sup>†</sup>												
Age < 18 years	49	13.8	33	11.9	21	63.6		16	21.1	7	43.8	
Age 18–29 years	195	55.1	150	54.0	69	46.0	***	45	59.2	14	31.1	
Age ≥ 30 years	110	31.1	95	34.2	64	67.4	**	15	19.7	5	33.3	
Males	21	5.9	17	6.1	10	58.8		4	5.3	1	25.0	
Non-Western	27	7.6	19	6.8	9	47.4		8	10.5	1	12.5	
Serious disease/disability	21	5.9	18	6.5	14	77.8	*	3	3.9	3	100.0	* F
Psychosis	13	3.7	10	3.6	4	40.0		3	3.9	0	0.0	
Previously sex assaulted	114	32.2	93	33.5	51	54.8		21	27.6	3	14.3	*
Addiction problem	61	17.2	55	19.8	24	43.6	*	6	7.9	2	33.3	
Prostitution	24	6.8	23	8.3	10	43.5		1	1.3	0	0.0	
Vulnerability not known	191	54.0	143	51.4	78	54.5		48	63.2	20	41.7	0.07
Sexual acts <sup>†</sup>												
Penetrated	248	70.1	183	65.8	107	58.5		65	85.5	22	33.8	
Not penetrated	48	13.6	42	15.1	26	61.9		6	7.9	3	50.0	
Suspected rape/assault	40	11.3	35	12.6	17	48.6		5	6.6	1	20.0	
Vague description	18	5.1	18	6.5	4	22.2	*	0	0.0	0		
Coercion <sup>†</sup>												
Violence exceeding holding	124	35.0	102	36.7	68	66.7	**	22	28.9	8	36.4	
Threats, pressure	20	5.6	10	3.6	7	70.0		10	13.2	6	60.0	0.08
Holding	107	30.2	82	29.5	49	59.8		25	32.9	7	28.0	
Sleep/intoxication	73	20.6	59	21.2	27	45.8	*	14	18.4	4	28.6	
Vague explanation	15	4.2	15	5.4	2	13.3	***	0		0		
<i>n</i> <sup>‡</sup>	339		268					71				
Suspicion of involuntary consumption alcohol/drugs <sup>†</sup>	72	26.5	62	26.5	28	45.2	*	10	26.3	2	20.0	
No such suspicion	200	73.5	172	73.5	106	61.6		28	73.7	11	39.3	
<i>n</i> <sup>‡</sup>	272		234					38				
Perpetrator <sup>†</sup>												
Single	271	76.6	213	76.6	129	60.6	*	58	76.3	18	31.0	
Multiple	65	18.4	48	17.3	24	50.0		17	22.4	8	47.1	
Unable to tell	15	4.2	15	5.4	1	6.7	***	0		0		
<i>n</i> <sup>‡</sup>	272		234					38				
Unknown/known <24 h	178	50.3	151	54.3	87	57.6		27	35.5	9	33.3	
Known	125	35.3	87	31.3	50	57.5		38	50.0	15	39.5	
Partner/ex-partner	30	8.5	20	7.2	15	75.0	0.08	10	13.2	2	20.0	
Unable to tell	15	4.2	15	5.4	1	6.7	***	0	0.0	0		
<i>n</i> <sup>‡</sup>	348		273					75				

Significance is calculated by chi-square or Fisher exact test (*F*), comparing reports between cases displaying each particular feature versus reports between all other cases known not to display this feature. *p*-values > 0.10 are not shown.

\**p* ≤ 0.05, \*\**p* ≤ 0.01, \*\*\**p* ≤ 0.001.

<sup>†</sup>According to complainants' descriptions.

<sup>‡</sup>*n* is specified as cases with no such information are excluded from the chi-square calculation.

TABLE 2—Registration with police, use of Sexual Assault Centre (SAC) services, and examination results. Total number of cases, complainants' arriving by police escort, complaints withdrawn and complainants' use of SAC services, separated into early and late arriving cohorts.

	Total		Early Cohort				Late Cohort				
			Early, Total		Reported		Late, Total		Reported		
	<i>n</i>	% Within Total	<i>n</i>	% Within Cohort	<i>n</i>	% Within Row	<i>p</i>	<i>n</i>	% Within Cohort	<i>n</i>	% Within Row
	354		278	100	154	55.4		76	100	26	34.2
Escorted by police	91	25.7	87	31.3	62	71.3	***	4	5.3	0	0.0
Withdrawal, early	11	3.1	11	4.0	11						
Withdrawal, late	13	3.7	13	4.7	13						
Counseling	300	84.7	237	85.3	139	58.6	**	63	82.9	20	31.7
Medical examination	283	79.9	248	89.2	145	58.5	**	35	46.1	15	42.9
Medical follow-up	164	46.3	136	48.9	95	69.9	***	28	36.8	13	46.4
Forensic medical examination	238	67.2	238	85.6	142	59.7	***				
Examination results:											
No injury examination	116	32.8	40	14.4	12	30.0	***				
No/minimal injuries	112	31.6	112	40.3	51	45.5	**				
Only extragenital injuries	59	16.7	59	21.2	37	62.7					
Only anogenital injuries	39	11.0	39	14.0	29	74.4	**				
Extragenital and anogenital injuries	28	7.9	28	10.1	25	89.3	***				

Regarding use of services, chi quadrate is calculated comparing those who reported using the service versus those who reported without using this service. Regarding examination results, chi quadrate is calculated for reporting within each injury group compared to those reporting among all other not within this injury group. *p*-Values > 0.10 are not shown.  
 \*\**p* ≤ 0.01, \*\*\**p* ≤ 0.001.

Type of sexual assault was coded according to the most serious act. *Suspected rape/sexual assault* denotes situations of strong suspicion, such as a victim with amnesia waking up naked with a stranger. Some victims presented *vague descriptions* of having been sexually assaulted, for example, appearing as delusions, or were unable to explain what happened owing to an intellectual disability. Some of the latter victims and some of those suspecting having been exploited during sleep or while intoxicated were also *unable to describe the perpetrators* (Tables 1 and 3). Assaults involving more than one act of coercion were coded according to the one most likely to result in visible physical injury. Extragenital injuries were registered when they resulted in concussion, distortion, fracture, wounds, or more than five bruises. Those with only a few minor bruises were coded as *no/minimal injuries*, as these are less relevant as evidence.

Cases registered by the police were traced through national and local police registers. Thus, all SAC cases registered with Norwegian police were identified, and three cases that had been reported abroad were also included. Police classification of the offense and date of registration were obtained from the police registers, as was the total number of rapes reported from the Oslo district. Intervals between assault, arrival at SAC, and registration with the police were calculated. Police files were reviewed for information of complainants' withdrawal of consent to investigation. Six files were not available.

Five women were seen after two separate assaults by different perpetrators. We included all assaults, as we wanted to explore which SAC cases were reported and casework thus available to the police. Cases have not been separated by gender, as the differences were minor (12) and unrelated to reporting.

Case patterns from the 2 years were similar and the data were merged.

*Definitions*

- *Complainant/victim*: an individual alleging an incident of sexual violence against her/him.
- *Rape, classified by police as rape*: penetration with penis/object/finger in vagina/anus or penis in mouth; coercion by force/

threats or exploitation during unconsciousness/drunkenness. These acts were at the time described in two sections in the Norwegian penal code, but are now merged.

- *FME*: trace evidence sampling and inspection for somatic injury, *de facto* cutoff at this SAC was 1 week.
- *Early cohort*: arrival in time for FME.
- *Late cohort*: arrival too late for FME.
- *Forensic benefit*: cases registered with police ≥2 days after FME at SAC. Because most trace evidence disappears within 24–36 h postassault (13), the chances of finding evidence are markedly reduced at any FME performed later. In organizations where FME is only performed at the request of the police, victims postponing police reporting ≥2 days would at best have an FME of reduced options for evidence or might risk no FME at all. Thus, those delaying police involvement represent the police's forensic benefit of self-referral FME. (Complainants consulting and reporting the same day ±1 are assumed to have approximately equal options for FME irrespective whether the service is organized as police-dependent or self-referral.)
- *Early withdrawal*: complainants' consent to further police involvement withheld shortly after notification; permission to collect medical evidence is rarely given.
- *Late withdrawal*: complainants' consent to cooperate withdrawn during on-going investigation; medical information had/could have been collected.

Differences were evaluated using a chi-square test. Unadjusted and adjusted odds ratios were calculated using binary logistic regression analysis with "registration with the police" as the dependent variable. The polytomous variables of assault characteristics were coded using the "classic rape" features as reference (penetrating assault, violent coercion, and perpetrator one single stranger). The early and late cohorts were analyzed separately. Univariate significant variables were entered into a forward stepwise logistic regression. The final models were tested for goodness of fit. SPSS version 11 was used (SPSS Inc., Chicago, IL).

TABLE 3—Registration with the police in the early cohort, unadjusted and adjusted odds ratio. Two logistic regression analyses are presented, both having “registered by police” as the dependent variable. The first includes variables related to complainants and the alleged assaults, that is, information available before any medical examination. The second also includes information on use of Sexual Assault Centre’s services and examination results. Unadjusted and adjusted odds ratios (OR) with 95% confidence intervals of OR are shown, significant values in bold.

	Unadjusted Odds, Significant		Adjusted Odds, Only Assault		Adjusted Odds, Also Services Included	
	OR	95% CI	OR	95% CI	OR	95% CI
Complainant						
Age 18–29	(ref)		***		***	
Age < 18	2.1	0.9–4.5	1.7	0.7–3.9	<b>2.7</b>	1.1–6.9
Age 30+	2.4	1.4–4.1	<b>3.1</b>	1.7–5.8	<b>3.2</b>	1.7–6.1
Serious disease/handicap	3.0	1.0–9.4				
Addiction problem	0.5	0.3–1.0	<b>0.4</b>	0.2–0.7		
Sexual acts						
Penetrated	(ref)					
Not penetrated	1.2	0.6–2.3				
Suspected assault	0.7	0.3–1.4				
Vague description	0.2	0.1–0.6				
Coercion						
Violence exceeding holding	(ref)		**			
Verbal	1.0	0.3–3.2	1.0	0.3–3.4		
Holding	0.7	0.4–1.4	0.7	0.4–1.3		
Exploitation of sleep/intoxication	0.4	0.2–0.8	<b>0.4</b>	0.2–0.9		
Vague description	0.1	0.0–0.4	<b>0.0</b>	0.0–0.5		
No info	0.1	0.0–0.5	0.1	0.0–0.96		
Perpetrator						
Single	(ref)		$p = 0.06$			
Multiple	0.7	0.3–1.2	0.7	0.4–1.4		
Unable tell/no information	0.0	0.0–0.3	<b>0.1</b>	0.0–0.8		
Unknown	(ref)				**	
Known	1.0	0.6–1.7			0.7	0.4–1.3
Partner/ex-partner	2.2	0.8–6.4			1.3	0.4–4.4
Unable tell/no information	0.1	0.0–0.4			<b>0.05</b>	0.01–0.3
Escorted at arrival	1.9	1.1–3.4				
Forensic medical examination						
No examination	(ref)				***	
No/minimal injuries on body	2.0	0.9–4.2			1.9	0.8–4.7
Only extragenital injuries	3.9	1.7–9.3			<b>2.9</b>	1.1–7.4
Only anogenital injuries	6.8	2.5–18.2			<b>5.0</b>	1.7–14.7
Extragenital and anogenital injuries	19.4	4.9–76.6			<b>20.1</b>	4.3–94.9
Medical follow-up	3.3	2.0–5.4			*** <b>2.8</b>	1.6–5.0

Age is categorized as shown because relation to reporting was U-shaped. Suspected involuntary intoxication is not included in the analyses owing to the amount of missing information. Hosmer and Lemeshow test goodness of fit was 0.727 when including only assault and victim characteristics in the analysis, 0.452 when also including use of services.

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

## Results

Among the 354 cases seen at the SAC, 180 (50.8%) were registered with the police, who had requested SAC documentation in 121 cases. Prior to the study, the center had no indication of police involvement in 27 of these reported cases. On the other hand, the center had mistakenly assumed that all cases where the police escorted the complainant to the center had been registered, whereas 29 of these 91 cases were never registered. Twenty-four registered complaints were withdrawn, 10 before SAC information was released. SAC cases registered with the police, coded as rape and having occurred in the Oslo police district, included only 103 of 197 (52%) total cases classified as rape by the police and reported from this area during the study period.

In *early cohort* presenting in time for FME, 154 of 278 (55%) cases were reported, in *late cohort* 26 of 76 (34%). The latter victims have previously been shown to be younger than those who arrived early (mean 24.3 vs. 28.3 years) and more often assaulted by someone known and by verbal enforcement only (12). Owing to differences in case profiles and reporting practices, the cohorts are presented separately.

Characteristics of victims and assaults are shown in Table 1 and use of available services in Table 2.

In the early cohort, several variables were significantly associated with police registration (Table 1). Weapons, voluntary consumption of alcohol and/or drugs, and site of assault had no impact (data not shown).

Making use of services was also related to reporting (Table 2). FME was performed in 238 cases: 96 (40%) of these were not registered with the police and FME was thus performed “in vain.” However, in 17 of the latter cases, victims were escorted by the police to the center, and formal police registration was assumed. Among victims subjected to FME, the likelihood for reporting was increased if anogenital injuries were present and decreased if physical injuries were absent.

The majority of victims who arrived early and reported to the police acted swiftly, 64% reported within the first day of the assault. The longest delay was 214 days. Complainants’ contact with the SAC and the police occurred on the same day  $\pm 1$  in 111 (70%) cases. Four victims reported  $\geq 2$  days before arriving at the center, and 38 victims reported  $\geq 2$  days after arrival. The 34 FMEs among the latter represent the police’s forensic benefit of self-

referral, constituting 24% of all SAC cases reported to the police where FME had been performed.

Withdrawal of complaints only occurred in the early cohort.

In the late cohort, serious disability was significantly associated with an increased likelihood for reporting, whereas previous sexual abuse was related to a reduced likelihood.

Hesitation before reporting was common, and median time from assault to reporting was 33 days (range 1–718 days; one outlier of 15 years). The intervals between attending the center and reporting varied considerably; 57% reported  $\pm 30$  days of consultation, no peak at consultation, range  $-4$  years to  $+2$  years. Three complainants had reported in time for FME but were not referred to the center.

Three logistic regression analyses were performed to investigate which variables most strongly predicted the likelihood of reporting (Table 3).

In the first analysis, independent variables were restricted to victim and assault characteristics in early cohort, that is, information available before FME. Age  $\geq 30$  years increased the likelihood, whereas addiction, exploitation during sleep/intoxication, and inability to describe coercion or the perpetrators decreased the likelihood of reporting.

The second analysis also included the use of services and examination results: age  $\geq 30$  years, presence of injuries, and follow-up compliance were associated with increased odds for reporting. “No information about perpetrator” reduced the odds.

The third multivariate analysis was performed in the late cohort. Neither of the univariate associations remained significant (data not shown).

## Discussion

Combining data from the SAC and the police showed that half of the cases had been registered with the police and that there were unexpectedly complex medical/legal interactions. Many complainants reporting rape are not referred to the center, several SAC cases are mistakenly assumed to be registered with the police and *vice versa*, complaints are withdrawn, and the police request medical information in only two-thirds of reported cases. However, nonreporting is the major reason for SAC case-work remaining unavailable to the police, comprising 40% of the forensic work.

The present proportion of cases registered with the police is at the low end of the range described by SACs, that is, 50–84% (2–5,8,14–16). However, Nordic SACs with low reporting rates experience high attendance rates related to the population at risk (12). Thus, when aiming to assist more victims, SACs may unmask more medical needs rather than increase reporting, enhancing the dilemmas of routine FME.

Withdrawal of complaints represents additional and unforeseen barriers to the use of SAC information. In these series, 13% of registered complaints were withdrawn. If adding the 29 victims that the police escorted to the center and that did not proceed to file a formal complaint, 25% of all those contacting the police later refuse to proceed. In comparison, at British SACs, 15–29% of complaints are withdrawn (14), and 11% of Swedish rape victims are “noncooperative” (17). The figures are substantial and raise questions about the interaction between the police and the complainant.

The police lose cases and information by not registering victims escorted SAC for later follow-up and by not referring complainants to the center. In Scandinavia, 36–50% of rape victims who report the crime do not consult medical services (8–10,17). Late reports

and domestic violence seem more common in cases not receiving medical assessment (10), but even victims who report late may profit from SAC assistance and could have been referred.

False allegations are not considered a problem at our center. A few cover-up stories occur, mainly elicited by a difficult life situation. These subjects may need assistance. Complaints made by persons that appear to be delusional seldom proceed to the police.

SAC-based predictors of reporting are only seen among cases that present early. Some associations match with previous SAC studies, for example, coercion by physical violence (11) and documented injuries (2,3,11), whereas others are not confirmed, such as use of weapons (11) and relationship to the perpetrator (2,4,14). In population surveys, assaults involving physical force and unknown perpetrators are more often reported, while drug-facilitated and incapacitated rape are reported less (7,18).

Previous SAC studies describe age as unrelated to reporting (2–4,11) or inversely associated with reporting (14), while in our series, those aged 18–29 years are the least likely to involve the police. Differences in age and case profiles, and cultural factors, may contribute to the divergences between the studies. Adolescents and young adults seem to be more influenced by myths about rape and less apt to involve the police (7,19).

In general, SACs report that victims’ consumption of alcohol or drugs before the assault is no obstacle to police involvement (3,4,6,11). In this study, signs of heavy consumption—addiction, exploitation during sleep/intoxication, and amnesia—were associated with very low odds for reporting, congruent with population surveys (7,18). These cases may still require forensic assessment of whether criminal acts have occurred, likewise cases affecting persons unable to provide a clear story.

Information available when the complainant arrives is therefore considered insufficient for performing FME selectively. Even cases with low odds for reporting need to be evaluated.

As physically injured victims more often report, efforts regarding the most laborious FMEs are justified. In the unreported FMEs, no or few injuries occur more commonly; thus, these examinations cause less stress to victims and less effort from the SAC.

No FME work remains unused in organizations working only at police request, but delayed reporting may reduce or forfeit the opportunity for obtaining evidence. In our study, 24% of FMEs reported to the police would have lost value if a request from the police had been waited for. Thus, self-referral organizations that routinely offer FME are advantageous to the police. In contrast to our findings, a mere 4.5% gain was achieved by examining victims who were considering reporting, but not those who stated that future police involvement was unlikely (6). In a British SAC-based study, <6% of the police reports were filed after SAC consultation (20). More studies are needed to make better estimates of the range of the benefit.

Victims who attend late report less often to the police than those who attend early, they hesitate more, and no influence can be detected from the SAC-based variables. These victims are assumed to be more representative of the invisible majority of those who are actually assaulted (12). The late cohort results may reflect that the included variables did not comprise other factors, for example, psychosocial, that may influence victims’ choice to report. However, the cases are few.

In other studies, *motives for reporting* include the following: to sanction the perpetrator, to protect others, fear, righteousness (14,21), social expectations, and support (21). Interestingly, *reasons for not reporting, postponing or withdrawing the complaint* are similar to reasons for not seeking medical help: skeptical social

attitudes, rape myths, negative expectations or experience with legal authorities, and trauma reactions (14,22–24).

Reporting could be increased by more systematic follow-up by the police, and the SAC could encourage more attendees to report. However, it is considered essential that victims make autonomous decisions (25), and this center has settled for neutral *pro et con* information, but facilitates reporting by arranging appointments with lawyers and the police if the complainant desires to proceed.

Whether police involvement is desirable in all cases has been questioned. Reporting and subsequent investigation are considered important parts of crime prevention and serve to emphasize society's condemnation of sexually abusive behavior. At the individual level, however, the answer is less obvious. Legal proceedings are stressful and may increase the risk of posttraumatic stress disorder (26), and prospects of conviction remain dismal even with evidence from FME (27). For those who do report, systematic and proper assessment by all involved professionals is essential. Assisting victims should be the primary aim of SACs, but not at the cost of forensic quality and objectivity.

### Strengths and Limitations

Combining medical and police data allow for a broad overview of the interaction between SAC and the police. Few similar studies have been carried out. Information obtained contributes to understanding the cooperation between complainants, forensic services, and the police.

The few complainants included twice are unlikely to introduce substantial bias. Some cross-sample tendencies regarding reporting may have been confirmed or disaffirmed in a larger series, for example, victims with serious disease being more prone to report and non-Western ethnic groups less. These observations have been described elsewhere (14,28). More important limitations reside in the age of the data, the retrospective design, and the use of data collected from practical work files. The latter factors imply some variations in details recorded, but a prospective design would be practically more difficult to perform.

Our data are no longer recent, and victims' willingness to attend SAC and report to the police may have changed, but the studied main issues remain relevant: reporting patterns, case flow between SAC and police, and forensic benefit of self-referral versus costs for SAC. The presented overview may serve as a baseline for further studies.

According to this SAC's annals, the numbers of cases have increased in recent years, from 210 ± 15 since 1999 to c. 300 since 2007, while the population has increased by 15%. Nowadays, the police seem to request information in more of SAC's cases (131/296 [44%] of all cases seen in 2008), but without access to police data, we cannot determine whether this is because of an increased tendency to report or to a more systematic collection of documentation.

Whether the present results from Norway are applicable for other countries remains to be explored. Replicate studies are recommended for monitoring trends and differences between centers. Because nonreporting and withdrawals only partly explain why SAC information is not used by the police, more studies are needed to clarify why the police do not always use available medico-legal information.

### Conclusion

Exact information on police reporting practices is necessary to understand how medical documentation is utilized or disregarded by the legal system. In the present series from a center offering

FME as routine, half of the information collected at the SAC remains unavailable to the police because victims do not report the incident, and 40% of FMEs are performed "in vain." An unforeseen and substantial loss of cases is because of withdrawal of complaints, which should alert the police. More complainants could be offered medical examination and help, and more cases could be investigated, if referrals were made systematically, and if complainants were actively followed up by the police.

Although several factors are associated with reporting among those attending SACs in time for FME, the predictive ability of these factors is not adequate for selective examination. On the other hand, when self-referral services perform FMEs as a routine independently of initial police involvement, this markedly increases the forensic medical information available to the police. The information from one in four FMEs would otherwise have been lost owing to delayed reporting.

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### References

1. Resnick HS, Acierno R, Kilpatrick DG. Health impact of interpersonal violence.2: medical and mental health outcomes. *Behav Med* 1997;23: 65–78.
2. McGregor MJ, Wiebe E, Marion SA, Livingstone C. Why don't more women report sexual assault to the police? *CMAJ* 2000;162:659–60.
3. Nesvold H, Worm AM, Vala U, Agnarsdottir G. Different Nordic facilities for victims of sexual assault: a comparative study. *Acta Obstet Gynecol Scand* 2005;84:177–83.
4. Schei B, Sidenius K, Lundvall L, Ottesen GL. Adult victims of sexual assault: acute medical response and police reporting among women consulting a center for victims of sexual assault. *Acta Obstet Gynecol Scand* 2003;82:750–5.
5. Du Mont J, Parnis D. Sexual assault and legal resolution: querying the medical collection of forensic evidence. *Med Law* 2000;19:779–92.
6. Ledray LE, Kraft J. Evidentiary examination without a police report: should it be done? Are delayed reporters and nonreporters unique? *J Emerg Nurs* 2001;27:396–400.
7. Kilpatrick D, Resnick H, Ruggiero K, Conoscenti LM, McCauley J. Drug-facilitated, incapacitated, and forcible rape: a national study. National Criminal Justice Reference Service, 2007, <http://www.ncjrs.gov/pdffiles1/nij/grants/219181.pdf> (accessed April 7, 2009).
8. Helström L. Stockholm South Hospital emergency clinic for raped women. First International Conference on Survivors of Rape; 2008 Nov 14–15; Aarhus, Denmark. Aarhus, Denmark: The Sexual Assault Centre, Aarhus University Hospital, 2008, [http://www.voldtaegt.dk/files/Lotti\\_Helstrom\\_Stockholm\\_Emergency\\_Clinic\\_for\\_Raped\\_Women.pdf](http://www.voldtaegt.dk/files/Lotti_Helstrom_Stockholm_Emergency_Clinic_for_Raped_Women.pdf) (accessed April 7, 2009).
9. Saetre M, Grytdal V. Voldtekt i Oslo 2001: gjennomgang av sentrale data fra anmeldte voldtekter ved Oslo politidistrikt [Rape in Oslo 2001] (English abstract not available). Oslo, Norway: Oslo politidistrikt [Oslo Police District], 2002.
10. Grytdal V, Meland P. Voldtekt i Oslo 2007: gjennomgang av sentrale data fra anmeldte voldtekter ved Oslo politidistrikt [Police-reported rape in Oslo 2007] (English abstract not available). Oslo, Norway: Oslo politidistrikt [Oslo Police District], 2008.
11. Du Mont J, Miller KL, Myhr TL. The role of "real rape" and "real victim" stereotypes in the police reporting practices of sexually assaulted women. *Violence Against Women* 2003;9:466–86.
12. Nesvold H, Friis S, Ormstad K. Sexual assault centers: attendance rates, and differences between early and late presenting cases. *Acta Obstet Gynecol Scand* 2008;87:707–15.
13. Allard JE. The collection of data from findings in cases of sexual assault and the significance of spermatozoa on vaginal, anal and oral swabs. *Sci Justice* 1997;37:99–108.
14. Kelly L, Lovett J, Regan L. A gap or a chasm? Attrition in reported rape cases. London, UK: Home Office-Research, Development and Statistics Directorate, 2005.

15. Kerr E, Cottee C, Chowdhury R, Jawad R, Welch J. The Haven: a pilot referral centre in London for cases of serious sexual assault. *BJOG* 2003;110:267–71.
16. Sugar NF, Fine DN, Eckert LO. Physical injury after sexual assault: findings of a large case series. *Am J Obstet Gynecol* 2004;190:71–6.
17. Grevholm E, Nilsson L, Carlstedt M. Våldtäkt: en kartläggning av polisanmälda våldtäkter. Stockholm, Germany: Brottsförebyggande rådet, 2005.
18. Myhill A, Allen J. Rape and sexual assault of women: the extent and nature of the problem: findings from the British Crime Survey. London, UK: Home Office-Research, Development and Statistics Directorate, 2002.
19. Danielson CK, Holmes MM. Adolescent sexual assault: an update of the literature. *Curr Opin Obstet Gynecol* 2004;16:383–8.
20. Lovett J, Regan L, Kelly L. Sexual assault referral centres: developing good practice and maximising potentials. London, UK: Home Office-Research, Development and Statistics Directorate, 2004.
21. Jordan J. Worlds apart? Women, rape and the police reporting process. *Br J Criminol* 2001;41:679–706.
22. Feldhaus KM, Houry D, Kaminsky R. Lifetime sexual assault prevalence rates and reporting practices in an emergency department population. *Ann Emerg Med* 2000;36:23–7.
23. Roberts JV. Criminal justice processing of sexual assault cases. *Juristat* 1994;14:1–19.
24. Petrak JA, Skinner CJ, Claydon EJ. The prevalence of sexual assault in a genitourinary medicine clinic: service implications. *Genitourin Med* 1995;71:98–102.
25. Dahl S. Rape: a hazard to health. Oslo, Norway: Scandinavian University Press, 1993.
26. Koss MP, Bachar KJ, Hopkins CQ, Carlson C. Expanding a community's justice response to sex crimes through advocacy, prosecutorial, and public health collaboration: introducing the RESTORE program. *J Interpers Violence* 2004;19:1435–63.
27. Du Mont J, White D. The uses and impacts of medico-legal evidence in sexual assault cases: a global review. Geneva, Switzerland: Sexual Violence Research Initiative, World Health Organization, 2007.
28. Lee J, Pomeroy EC, Yoo SK, Rheinboldt KT. Attitudes toward rape: a comparison between Asian and Caucasian college students. *Violence Against Women* 2005;11:177–96.

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