

**Nordic empirical rape studies –  
of assistance to rape center workers**



Danish National Centre for Psychotraumatology  
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## Introduction

In all the Nordic countries, centres for rape victims are established. The organizational structures, the staffing, and the services are very diverse (Jørgensen & Elklit, 2020).

The basic idea of a rape victim center is that all professionals come to the center and yield services to the victim there, instead of the victim having to move around and get the services at different places; sometimes this is called the gate model or a one stop center. Ideally, this will lead to a close collaboration among all professional groups – in the best interest of the survivor (Bramsen et al., 2009).

A number of organizational matters (resources, target group definition, training, geography, embeddedness in a larger structure (e.g., a hospital)) means that the centers function very differently despite the common basic idea of the gate model. It would be a step forward if there were shared Nordic guidelines to secure optimal treatment.

Rape is an overwhelming experience with many serious and long-lasting sequelae, well documented during the last 50 years. An early, effective intervention could reduce the negative consequences and help the victim to get on the tracks for a good life course. Few observational studies have been performed globally on the effectiveness of the victims of rape centres. There is a huge need to find an optimal treatment and only a few studies exist that can serve as a model in the centers.

Rape is not a primary medical event even if it is often treated in a hospital setting but a social incident with somatic, psychological, and social sequelae. Because rape is also a criminal act, police and court are often engaged. The juridical definitions of rape and the privacy of the act may be reasons for the fact that relatively few perpetrators are convicted – and that many rape victims feel let down by a system that is not able to have their perpetrator convicted and in this way being recognized as credible victim who also deserves a compensation.

In the 1970's and 1980's, there was a huge interest in rape research. The interest wave vanished but has now reappeared, although the amount of research is still modest. It is difficult to reflect many of Nordic experiences in US publications on sexual assault.

Therefore, we wanted to collect important empirical studies in this report that can be a springboard for disseminating the solid knowledge that has been collected in the Nordic countries. The main idea is that the professionals who work in this field has this basic knowledge as one of the pillars of their professional competence.

This does not mean that nurses and psychologists have to know the details of forensic chemistry methods but that a basic understanding of the various professional's fields who cooperate to help rape victims, is important to reach a high level of competence, because it is exactly the quality of the collaboration which lifts the common task of serving the victim.

The report is divided in areas that corresponds to professionals that the rape victim will meet or hear the results from. We have picked empirical studies only published in English peer-reviewed journals to ensure a high level of scientific quality.

Our focus is on adolescents and adults who have been exposed to physical rape corresponding to those who come to the centers. This means that we have not included other types of sexual assault or harassment, as incest, digital assault/revenge porn, child sexual abuse, or studies on perpetrators or general sociological/criminological knowledge about prevalence and the like. We have also stayed away from general theories and illustrations of these, despite their potential usefulness.

In the various abstracts, we have emphasized the main findings while background, method, and analytic details stand as the background for the main result.

Collectively we have a lot of good and important knowledge that is useful in the clinic, at the lab, and in the courtroom. This review also wants to clarify where we lack knowledge within the various fields. A few examples will illustrate this point:

- Many victims to come to the centers are very vulnerable – what are their problems and how can we help them better?
- Routine treatment seems not very efficient – which methods work best for whom?
- Many charges do not lead to a conviction – is all the work with securing evidence justified?
- And outside the center spheres: can the cumulated knowledge from the field in some ways be used to prevent rape?

We see this report as a work in progress and hope that the staff in the Nordic rape centres will receive it well and contribute to further work on other topics to be included. We also expect colleagues to contribute to following updates with new studies and omissions we have not been aware of.

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## Organization of Nordic centers of rape victims

### Denmark, Aarhus

Bramsen, R. H., Elklit, A. & Nielsen, L. H. (2009). A Danish Model for Treating Rape Victims – A Multidisciplinary Public Approach. *The Journal of Aggression, Maltreatment, and Trauma*, 18, 886-905.

*Most centers for rape and sexual assault victims today build on the original principles proposed in Boston by Burgess and Holmstrom in the 1970s (Burgess, 2006; Burgess & Holmstrom, 1973). In line with technological advances, scientific developments, and societal changes, the standards of and the framework behind these centers must be assessed and developed further to accommodate the growing need for rape trauma services in Europe and worldwide. This article describes the experiences of a public Danish center for rape victims and proposes a management model for current and future rape victim centers.*

### Center attendance

#### Iceland

Gisladottir, A., Gudmundsdottir, B., Gudmundsdottir, R., Jonsdottir, E., Gudjonsdottir, G. R., Kristjansson, M., & Valdimarsdottir, U. A. (2012). Increased attendance rates and altered characteristics of sexual violence. *Acta Obstetrica et Gynecologica Scandinavica*, 91(1), 134–142. DOI: 10.1111/j.1600-0412.2011.01283.x

*Objective: To study the attendance rates and characteristics of sexual violence presented at emergency services for rape victims, over a 10-year period.*  
*Design: Incidence study. Setting: Rape Trauma Service, within an emergency department at a tertiary referral university hospital. The total female population in Iceland. Methods: Medical records on visits were reviewed and systematically coded. Annual attendance rates were calculated over time as number of visits per 10 000 female inhabitants aged 13-49 years. Characteristics of sexual violence, perpetrators and victims were compared between 1998-2002 and 2003-2007. Main outcome measures: Annual attendance rates and characteristics of sexual violence. Results: Of 1153 visits, 828 (71.8%) were due to severe sexual violence (penetration). Annual attendance rates of all sexual violence increased from 12.5 to 16.9 per 10 000 women aged 13-49 ( $p < 0.01$ ). Attendance rates due to severe sexual violence increased specifically among women aged 18-25 ( $p < 0.01$ ). The proportion of assaults involving multiple perpetrators increased from 13.9% in 1998-2002 to 18.9% in 2003-2007 ( $p = 0.05$ ). With time, a higher proportion of victims had seriously impaired consciousness due to alcohol consumption ( $p < 0.01$ ) and had used illegal drugs prior to assault ( $p < 0.05$ ). Conclusions: The findings point towards an increase in women's visits to specialized emergency services for rape victims, particularly in the age group 18-25 years. The increased role of multiple perpetrators, alcohol and illicit drugs in sexual violence calls for further attention.*

## Nordic

Nesvold, H., Worm, A. M., Vala, U., & Agnarsdóttir, G. (2005). Different Nordic facilities for victims of sexual assault: a comparative study. *Acta Obstetricia et Gynecologica Scandinavica*, 84(2), 177–183. DOI: 10.1111/j.0001-6349.2005.00641.x

*Background: Open multidisciplinary centers were operated in the mid 1990s for victims of sexual assaults in Oslo and Reykjavik. However, in Copenhagen and Helsinki forensic medical examination was only available to victims who reported directly to the police. One of the main aims of this study was to compare the effect of these different service facilities in four Nordic capitals on the victims' frequency to seek help and report sexual assaults to the police. Methods: The age and attendance profile of 380 individuals, seeking support after sexual assault, was compared for the four capitals over a period of 1 year. The circumstances and consequences of assault, frequency and time lag of reporting were also compared. Results: Open centers received several times more victims, especially in younger age groups, including more reported cases, when compared with the population at risk than forensic institutes. Victims were seen earlier for examination at forensic institutes that dealt with a more limited spectrum of sexual assaults than the open centers. The proportion of rape was higher amongst victims brought to forensic institutes whereas a higher proportion of victims received at open centers had been exposed to less violent assaults. The frequency of visits was higher at weekends, between 50% and 70% of victims reported consumption of alcohol, and one-third were attacked while sleeping. In the majority of cases only one perpetrator was involved, most often unknown or peripherally known to the victim. Conclusion: Open multidisciplinary centers receive and assist considerably more victims, reporting and not reporting sexual assaults than forensic institutes.*

Nesvold, H., Friis, S., & Ormstad, K. (2008). Sexual assault centers: attendance rates, and differences between early and late presenting cases. *Acta Obstetricia et Gynecologica Scandinavica*, 87(7), 707–715. DOI: 10.1080/00016340802189847

*Objective: Sexual assault centers (SACs) aim at assisting victims and to provide forensic medical examination (FME). This study explores the gap between assaults actually occurring and those seen at SAC; and the characteristics of cases presented in time/too late for FME (early and late cohorts). Design: Retrograde descriptive study. Setting and sample: A two-year series from a self-referral SAC; characteristics of victims, assaults, use of services. Methods: Chi-square, uni- and multivariate logistic regression analyses. Main outcome measures: Number of female victims seen/female at-risk population (attendance rates). Case and service profiles in the two cohorts. Adjusted odds for late presentation. Results: Attendance rates for females were 0.12% (14-55 years); an estimated 4-7% of sexually assaulted females in the catchment area. Two hundred and seventy eight victims arrived in time for FME, 76 later; 6% males. Assaults in the early cohort were more often performed by strangers. Two hundred and thirty-eight victims underwent FME, 55% complied with follow-up, 55% reported to the police. The late cohort contained more adolescent victims, more acquainted/partner perpetrators, more verbal coercion; 45% medically examined, 80% follow-up compliance; 34% reported to police. Further referrals occurred*



equally often in both cohorts; 12% to somatic and 39% to psychiatric services. Among victims seen, 5% died within 7 years of consultation. Conclusion: Cases seen at SAC are strongly selected. The late cohort seems more representative of the commonly occurring assaults; young victims, known assailants. Even late presenters are in need of a multidisciplinary approach.

## Prevalence

Larsen, M., Hilden, M., & Lidegaard, Ø. (2015). Sexual assault: A descriptive study of 2500 female victims over a 10-year period. *BJOG : An International Journal of Obstetrics and Gynaecology*, 122(4), 577-584. DOI: 10.1111/1471-0528.13093

*Objective* To describe the victims of sexual assault and the circumstances in which the assaults occur. *Design* Descriptive case study. *Setting* Centre for Victims of Sexual Assault (CVSA), Rigshospitalet, Copenhagen, Denmark. *Population or sample* A total of 2541 women attending CVSA from 2001 to 2010. *Methods* All women attending CVSA underwent a standardised data collection procedure. Descriptive bivariate analysis and logistic regression analysis were performed. *Main outcome measures* Associations between different assault characteristics and (1) the age of the victim and (2) the relationship between victim and perpetrator. *Results* Two-thirds of the victims were aged 15–24 years. Seventyfive percent had met the perpetrator before the sexual assault and 70% reported the assault to the police. A physical injury was found in 53, and 27% sustained an anogenital lesion. Alcohol was involved in 60% of the cases. One-third of the victims had experienced a previous sexual assault(s). Women were more likely to report to the police when they were assaulted by a stranger (odds ratio [OR] 1.9, 95% confidence interval [95% CI] 1.3–2.6) and sustained a physical injury (OR 1.7, 95% CI 1.4–2.2) or anogenital lesion (OR 1.5, 95% CI 1.1–2.0). Women aged 45 years or older were more likely to sustain a physical injury (OR 2.0, 95% CI 1.2–3.2) or an anogenital lesion (OR 2.1, 95% CI 1.4– 3.2). *Conclusions:* Our results challenge the typical stereotype of a violent rape attack by a stranger, which is important in creating an environment where women are not reluctant to seek help after a sexual assault. Young age and drinking alcohol were risk factors for sexual assault, and we need to address this when considering preventive strategies.

## Forensic evidence or medication

### General recommendations

Lynnerup, N., Hjalgrim, H., & Eriksen, B. (1995). Routine use of ultraviolet light in medicolegal examinations to evaluate stains and skin trauma. *Medicine, Science, and the Law*, 35(2), 165–168. DOI: 10.1177/002580249503500211

*The use of ultraviolet light induced fluorescence as an aid in forensic medical examinations of rape victims was evaluated preliminarily in a retrospective, non-consecutive study. In a four-month period, 17 cases were referred by the police for examinations at the Institute of Forensic Pathology. Ultraviolet light illumination (UVI) was used in seven cases, and in six cases fluorescent skin areas were observed.*

The fluorescence was due to lesions in four cases and stainings with saliva and semen in other two cases. In at least two cases, skin trauma detected with UVI were unobserved in ordinary light. It is concluded that UVI should be a routine part of forensic medical examinations. It may assist the forensic medical examiner in finding skin trauma and in locating stains, thus enabling retrieval of material for serological analyses. UVI is simple to carry out, requiring only a small, portable ultraviolet light source.

Kaarstad, K., Rohde, M., Larsen, J., Eriksen, B., & Thomsen, J. L. (2007). The detection of female DNA from the penis in sexual assault cases. *Journal of Forensic and Legal Medicine*, 14(3), 159–160. DOI: 10.1016/j.jcfm.2006.05.003

An investigation was performed with the aim of assessing the success rate of the examination of penile swabs or imprints for the detection of the female DNA profile. Two hundred twenty seven cases from a 3-year period were retrospectively reviewed. In 57% of the cases, no suitable material was available. Of the remaining 97 cases, 26 provided a DNA profile from the female victim. It is concluded that although the total success rate is low, it is worthwhile performing the examination, especially if there is a short interval between the alleged sexual assault and the examination.

Hagemann, C. T., Stene, L. E., Myhre, A. K., Ormstad, K., & Schei, B. (2011). Impact of medico-legal findings on charge filing in cases of rape in adult women. *Acta Obstetrica et Gynecologica Scandinavica*, 90(11), 1218–1224. DOI: 10.1111/j.1600-0412.2011.01246.x

*Objective:* To assess the impact of the medical documentation and biological trace evidence in rape cases on the legal process. *Design:* Retrospective descriptive study. *Setting and sample:* Police-reported cases of rape of women  $\geq 16$  years old in the Norwegian county of Sør-Trøndelag from January 1997 to June 2003. *Methods:* Police data were merged with data from the Sexual Assault Center at St Olav's Hospital. Charged and non-charged cases were compared. *Main outcome measures:* Medico-legal findings and legal outcome. *Results:* A total of 185 police-reported cases were identified. Of the 101 cases examined at Sexual Assault Center, charges were filed in 18 cases. Extragenital injuries were documented in 49 women; five were life threatening. Anogenital injuries were documented in 14 women; eight had multiple anogenital injuries. Documentation of injuries was not associated with charge filing. In only 33% of the cases were swabs collected from women's genitals used as trace evidence by the police. When used, this increased the likelihood for charge filing. A DNA profile matching the suspect was identified in four of the 18 charged cases and in only one among the 54 non-charged cases. *Conclusions:* Half of the women had one or more documented injury. Only one-third of the trace evidence kits collected from the women's anogenital area were analyzed. The analysis of swabs was associated with charge filing, regardless of test results. Increased use of such medical evidence, especially in cases of stranger rape, may ensure women's rights and increase available information to the legal system.

Scherer, S., Hansen, S. H., & Lynnerup, N. (2014). Sexually assaulted victims are getting younger. *Danish Medical Journal*, 61(2), A4780.

*Introduction: From the clinical forensic examination reports produced by the Department of Forensic Medicine, Department of Forensic Medicine, Faculty of Health Sciences, University of Copenhagen, Denmark, in 2007 concerning rape, attempted rape and sexual assault (RAS), circumstances were extracted and analysed focussing on age, relationship, lesions, violence, location and alcohol intoxication. Material and methods: A total of 184 girls and women over the age of 12 years were included in this retrospective study. Results: The median age of the victims was 20 years (range 12-89 years). 75.5% were under 30 years of age. 53% knew the perpetrator. More than one perpetrator was reported in 11%. 46% of the assaulted victims had a total number of 1-5 observed lesions and these were observed in all types of perpetrator relationship. Eight victims with more than 20 lesions were assaulted by a stranger or an acquaintance (first contact) (ACQ). 50% of the victims who had lesions were assaulted by a stranger or an ACQ. 55% of assaults occurred in private homes. A total of 107 had their blood alcohol concentration (BAC) measured. In all, 133 victims were assessed by the examining doctor to be unaffected by alcohol, eight of these had a BAC exceeding 1.0 per thousand. There was no correlation between the BAC and number of lesions. Two victims had a positive pregnancy test and were pregnant before the RAS. Conclusion: In Denmark, RAS victims' age continues to decrease. RAS by a stranger or an ACQ involves a higher risk of lesions and the possibility of many lesions. More than half of those exposed to manual strangulation or other kinds of violence against the neck were assaulted by a stranger or an ACQ. Half of the women knew the perpetrator and the perpetrator was an ACQ in 26% of the cases.*

Forr, C., Schei, B., Stene, L. E., Ormstad, K., & Hagemann, C. T. (2018). Factors associated with trace evidence analyses and DNA findings among police reported cases of rape. *Forensic Science International*, 283, 136–143. DOI: 10.1016/j.forsciint.2017.12.025

*Objective: The aim of this study was to examine the association between victim, suspect and assault characteristics and (1) forensic analysis of trace evidence, (2) detection of spermatozoa and (3) DNA match in police-reported cases of rape/attempted rape. In addition, we explored whether DNA findings were associated with legal outcome. Methods: We conducted a retrospective, descriptive study based on police-reported rapes and attempted rapes of women  $\geq 16$  years of age in Sør-Trøndelag Police District throughout 1997-2010. Police data were merged with information from the Sexual Assault Centre (SAC) at St. Olavs University Hospital, Trondheim, Norway. We used binary and multivariable logistic regression for the comparisons. Results: We identified 324 victims (mean age 24 years). The police requested analysis in 135 (45%) of the 299 collected victim samples. The police decision to analyze was after adjustment associated with the victim being employed or under education, and a public venue, but not with interval from assault to sampling. Spermatozoa were detected in 79 (61%) of the analyzed cases, of which 71 were collected from victims within 24h. Interval from assault being  $< 24$ h and reporting a penetrative assault remained associated with the findings of spermatozoa after adjustments. Forensic analyses of trace evidence collected from victim, suspect and/or venue disclosed matching DNA profiles in 57 (40%) of a total of 143 analyzed cases. Matching DNA profiles were associated with suspect being known to the victim and with the venue being private. A higher proportion of cases with a DNA match were*

*prosecuted in court*: 20 of the 29 cases prosecuted. However, despite a DNA match 35 cases were anyway dismissed because of insufficient evidence. Conclusions: Although many of the associations in our study were expected, it is still important to report the actual numbers to gain insight into the importance of a DNA match in legal proceedings. A substantial proportion of cases with DNA match was dismissed because of insufficient evidence. To strengthen the justice response to sexual assault, it is essential to generate knowledge about the role of medico-legal evidence in such cases, and there are obviously other non-medical factors influencing the legal decisions.

## **Injuries and lesions in rape victims**

Hilden, M., Schei, B., & Sidenius, K. (2005). Genitoanal injury in adult female victims of sexual assault. *Forensic Science International*, 154(2), 200-205. DOI: 10.1016/j.forsciint.2004.10.010

*Objectives: To evaluate the presence and extent of genitoanal injury among sexually assaulted women and to estimate the risk of injury in subgroups according to the type of assault and to the sexually assaulted women's susceptibility to injury. Study design: A case-control study of 249 women exposed to sexual assault. Injury identified by gross visualization. Women with and without injury were compared. Logistic regressions analyses were performed to calculate the risk of injury. Results: Thirty-two percent sustained genitoanal injury. Anal penetration and assaults on women without prior sexual experience were associated with genitoanal injury. Conclusions: Most women do not have visible genitoanal injuries. The risk of sustaining genitoanal injury during a sexual assault is higher among women without prior sexual intercourse experience and among women exposed to anal penetration. The severity of the assault is a poor predictor of genitoanal injury.*

Ingemann-Hansen, O., Sabroe, S., Brink, O., Knudsen, M., & Charles, A. V. (2009). Characteristics of victims and assaults of sexual violence--improving inquiries and prevention. *Journal of Forensic and Legal Medicine*, 16(4), 182-188. DOI: 10.1016/j.jflm.2008.07.004

*The purpose of our study was to provide descriptive data on victim and assault characteristics in sexual violence and to ascertain risk factors in the sequence of the assault events. Retrospective data were collected on all sexual assault victims presented to the sexual referral centre, the police and the Institute of Forensic Medicine in Aarhus, Denmark, during a five-year period. Four hundred and twenty-three victims were included. The annual incidence rate was 14.5 per 100,000 inhabitants aged 12-87 years and the "dark figure" was estimated to be 1.34. Median age was 21 years; 69% of the victims knew the assailant, and penile intercourse was reported in 59% of the cases. Young age and drinking alcohol were risk factors for the assault to take place in a public place. Information to high-risk groups identified by this study should be integrated in approaches of modifying sexual behaviour. Furthermore, the results from this study are useful in supporting staff and police investigators in the guidance of their efforts regarding treatment and inquiries.*

Moller, A. S., Backstrom, T., Sondergaard H. P. & Helstrom L. (2012). Patterns of injury and reported violence depending on relationship to assailant in female Swedish sexual assault victims. *Journal of Interpersonal Violence*, 27(16), 3131–3148. DOI: 10.1177/0886260512441261

*Earlier studies have explored the differences between known-assailant sexual assaults and stranger assaults and reported the stranger assaults as being more violent. Only a few studies have discriminated between sexual assaults by intimate partners from assaults by other known assailants when comparing with assaults by strangers. In this study, we explored differences in the extent of violence and physical injury in sexual assaults committed by intimate partners compared with assaults by strangers and acquaintances. Medical and forensic records of 690 consecutive women attending a sexual assault center in Stockholm, Sweden were reviewed. The final sample included in the analysis consisted of 503 patients. Our results showed that women sexually assaulted by their intimate partners more frequently reported physical violence (OR = 4.1) than women assaulted by strangers (OR = 2.0) and acquaintances (OR = 1.0). Genital injuries were not found to be related to the victim-assailant relationship in this study. Extragenital injuries showed a tendency toward being more frequently found after intimate partner assaults compared with stranger and acquaintance assaults; however, this was not found to be significant in adjusted analyses. Previous history of sexual assault was more common, and seeking medical care within 72 hr as well as being under the influence of alcohol during the assault was less frequent among intimate partner victims. These results support the conclusion that sexual assaults committed by intimate partners, contradictory to earlier studies, are likely to involve more physical violence and result in injuries just as often as assaults committed by strangers.*

Astrup, B. S., Ravn, P., Lauritsen, J., & Thomsen, J. L. (2012). Nature, frequency and duration of genital lesions after consensual sexual intercourse-implications for legal proceedings. *Forensic Science International*, 219(1-3), 50–56. DOI: 10.1016/j.forsciint.2011.11.028

*Objective: The purpose of this study was to make a normative description of the nature and duration of genital lesions sustained during consensual sexual intercourse, using the three most commonly used techniques; visualisation using the naked eye, colposcopy and toluidine blue dye followed by colposcopy. Methods: Ninety eight women were examined within 48 h of consensual sexual intercourse. Fifty of the women were examined twice again within the following 7 days of sexual abstinence after the first examination. Results: The participants had a median age of 22.4 years and 88% were nulliparous. Lesions were frequent; 34% seen with the naked eye, 49% seen with colposcopy and 52% seen with toluidine blue dye and subsequent colposcopy. The lesions lasted for several days; the median survival times for lacerations were 24, 40 and 80 h, respectively. Conclusions: The legal implications of these findings are that genital lesions by themselves do not corroborate a rape complaint. Genital lesions may, however, corroborate specific details of a case and should be documented as carefully as any other lesion in rape complaints.*

Astrup, B. S., Ravn, P., Thomsen, J. L., & Lauritsen, J. (2013). Patterned genital injury in cases of rape--a case-control study. *Journal of Forensic and Legal Medicine*, 20(5), 525–529. DOI:10.1016/j.jflm.2013.03.003

*A pattern of genital injury that separates trauma seen in sexual assault cases from trauma seen following consensual sexual intercourse has been a matter of debate. This study aimed at clarifying the question by eliminating as many confounders as possible in a prospective, case-control setup. A total of 98 controls and 39 cases were examined using the naked eye, the colposcope and toluidine blue dye followed by colposcopy. The overall frequency of having at least one lesion was strikingly similar in the two groups, but cases had significantly more abrasions, a trend towards more haematomas and a higher frequency of multiple lesions. Cases had a higher frequency of lesions in locations other than the 6 o'clock position. Our data suggests that cases have larger, more complex lesions. In conclusion, this study has confirmed the existence of different patterns of genital lesions. Background data for detection of genital lesions using the three most commonly used techniques is provided. These results will aid in the interpretation of findings seen when examining sexual assault victims.*

Astrup, B. S., Lauritsen, J., Thomsen, J. L., & Ravn, P. (2013). Colposcopic photography of genital injury following sexual intercourse in adults. *Forensic Science, Medicine, and Pathology*, 9(1), 24–30. DOI: 10.1007/s12024-012-9394-2

*The aim of this study was to evaluate interpretations and the reproducibility of interpretations when looking at colposcopic photographs in a forensic setting, as well as discussing some of the dilemmas and pitfalls of forensic colposcopic photography. A total of 316 colposcopic photographs from 51 women taken on three occasions following consensual sexual intercourse, and 78 colposcopic photographs from 39 rape victims, were evaluated by four different observers. Photographs were taken in the same setting, by the same group of investigators, before and after application of toluidine blue dye. The overall Kappa-value for the four observers' judgment of lesion vs. no lesion was 0.41 which can be interpreted as moderate agreement. Intra-observer agreement was calculated for two of the observers looking at photographs with a 10 months' time-gap, and the Kappa-values were 0.41 and 0.52. Positive and negative predictive values of the photographs were 82 and 81 % respectively. This study demonstrates relatively poor reliability of colposcopic photography. Some would argue that this makes colposcopic photography a low-quality method of evaluation and that forensic science should aim for higher standards because of its use in court. Others would argue that as long as the limitations of a scientific method are acknowledged then it is still eligible for use. The moderate agreement and accuracy stresses the need for quality control in the gynecological part of a rape examination. Colposcopic photography also provides a good option for supervision and teaching in an ethically difficult setting. It strengthens the legal rights for both victim and perpetrator.*

Scherer, S., Hansen, S. H., & Lynnerup, N. (2014). Discrepancy between information reported by the victims of sexual assaults and clinical forensic findings. *Danish Medical Journal*, 61(9), A4899.

*Introduction: From the clinical forensic examination reports made at the Department of Forensic Medicine, the University of Copenhagen, in 2007 concerning rape, attempted rape and sexual assault (RAS), information about the assault, including both violence and the perpetrator's line of sexual action was extracted, analysed and compared to the observed lesions (LE). Material and methods: A total of 184 girls and women were included in this retrospective study. Results: 75.5% of the victims were under 30 years of age. Observed LE: 79% had observed LE. 41% had body LE only, 19% genito-anal LE only, and 40% had both body and genito-anal LE. Half of the victims, who reported no exposure to violence, had body LE. Five victims also had LE of a self-inflicted character. Genito-anal LE: 47% had genito-anal LE, 64% of whom had one or two, commonest a tear. Body LE: 64% had body LE. 57% was caused by slight, blunt force. Information on line of sexual action was present in 148 cases. A total of 123 victims reported penetration: 94% vaginal, 16% anal and 20% oral. Three were exposed to anal penetration only. Eleven perpetrators used a condom. 50% of the cases with vaginal and/or anal penetration had genito-anal LE. Victims with both vaginal and anal penetration and victims who reported more than one perpetrator did not show more genito-anal LE. Anal penetration or attempted anal penetration has increased to 21% of cases. Conclusion: Young victims are exposed to RAS. Half of them have genito-anal LE, typically one. Anal penetration or attempted anal penetration is increasing. This will often cause genito-anal LE. This finding stresses the importance that these examinations take place where both forensic and health-care expertise are offered.*

## **Drugs in rape**

Johansen, S. S., & Dahl-Sørensen, R. (2012). A drug rape case involving triazolam detected in hair and urine. *International Journal of Legal Medicine*, 126(4), 637–643. DOI: 10.1007/s00414-011-0654-6

*In recent years, there has been heightened awareness regarding the use of drugs to modify a person's behavior to facilitate crime. A drug rape case involving the potent, short-acting sedative triazolam will be presented. On three occasions, the victim consumed green tea and chocolate before being massaged and ultimately sexually abused. Screening for alcohol, commonly used drugs and illicit substances in blood and urine sampled during the forensic examination 20 h after the last incident, was negative. Consequently, hair samples for chemical analysis were taken from the assaulted individual 34 days after the last incidents. The hair was cut into three 2-cm segments (0-6 cm) that were washed, dissolved in extraction solvent and screened and verified by ultra performance liquid chromatography coupled with time of flight mass spectrometry (UPLC-TOF-MS) and with tandem mass spectrometry (UPLC-MS/MS), respectively. In the 2-cm hair segment corresponding to the period of the alleged assaults, the presence of the sedative triazolam was revealed at a concentration of 1.0 pg/mg hair. The preserved urine sample, taken 20 h after the last incident, was reanalyzed by UPLC-MS/MS for metabolites of triazolam, and 39 µg/l α-hydroxytriazolam was detected in the hydrolyzed urine. This case illustrates that hair is a valuable forensic specimen in situations where natural processes have eliminated the drug from typical biological specimens due to delays in the crime being reported. Furthermore, it was possible to verify the hair finding with a urine sample by detection of a metabolite of triazolam.*

Birkler, R. I., Telving, R., Ingemann-Hansen, O., Charles, A. V., Johannsen, M., & Andreasen, M. F. (2012). Screening analysis for medicinal drugs and drugs of abuse in whole blood using ultra-performance liquid chromatography time-of-flight mass spectrometry (UPLC-TOF-MS)--toxicological findings in cases of alleged sexual assault. *Forensic Science International*, 222(1-3), 154–161. DOI: 10.1016/j.forsciint.2012.05.019

*An ultra-performance liquid chromatography time-of-flight mass spectrometry (UPLC-TOF-MS) method for simultaneous screening of 46 medicinal drugs and drugs of abuse in whole blood was developed and validated. The method includes most of the commonly used and abused drugs such as amphetamines, cocaine, benzodiazepines, and opioids. Chromatographic separation of the targeted drugs was achieved using a Waters ACQUITY UPLC coupled to a Waters Micromass LCT Premier XE time-of-flight mass spectrometer. The total chromatographic run time was 13.5 min injection to injection. The estimated method LOQ is in the range of 0.06-27 ng/g, which is below the therapeutic levels for each of the drugs analyzed but LSD. The extraction recovery ranged from 6% to 197% with median value 95% and mean value 82%. Matrix effect ranged from 81% suppression to 29% enhancement of the signals compared to signals obtained in the absence of biological matrix. The method was tested on 55 authentic forensic toxicology samples confirming the same positive results as found using the routine analytical procedures as well as some additional compounds. Recently there has been considerable attention paid to drug-facilitated sexual assault and the toxicological findings in these cases. As part of a pilot study to investigate the prevalence of medicinal drugs, drugs of abuse, and alcohol in victims of alleged sexual assault, biological specimens were obtained from 167 victims being examined at the Sexual Assault Center in Aarhus, Denmark. The obtained blood samples were analyzed using the novel screening method supported by additional analyses for e.g. THC and alcohol. 124 victims reported they have been drinking alcohol prior to the assault (74%). Alcohol analyses revealed 59 positive findings (48%). 35 of the cases were found positive for one or more drugs excluding alcohol (21%). 20 of the victims reported they have been subject to a drug-facilitated sexual assault (12%). For the victims suspecting drug-facilitated sexual assault, the toxicological analyses revealed four positive for alcohol and nine victims were positive for one or more drugs, with six of the victims found positive for benzodiazepines or other drugs with sedative effects. It was notable that victims tested positive for medicinal drugs and drugs of abuse as well as victims of alleged drug-facilitated sexual assault in average underwent medical examination later than the whole study population.*

Hagemann, C. T., Helland A., Spigset, O., Espnes, K. A., Ormstad K. & Schei B. (2013). Ethanol and drug findings in women consulting a Sexual Assault Center – Associations with clinical characteristics and suspicions of drug-facilitated sexual assault. *Journal of Forensic and Legal Medicine*, 20(6), 777–784. DOI: 10.1016/j.jflm.2013.05.005

*The purpose of the study was to describe toxicological findings among women seeking health care after sexual assault, and to assess the relationship with so-called proactive DFSA (drug facilitated sexual assault). We also explored associations between ethanol in blood/urine and background data, assault characteristics, and clinical findings.*



We conducted a retrospective, descriptive study of female patients  $\geq 12$  years of age consulting the Sexual Assault Center at St. Olavs University Hospital, Trondheim, Norway. They were examined between July 1, 2003 and December 31, 2010, and urine and/or blood were analyzed for ethanol and selected medicinal/recreational drugs.

Among the 264 patients included, ethanol and/or drugs were detected in 155 (59%). Of the 50 patients (19%) testing positive for drugs other than ethanol, benzodiazepines/benzodiazepine-like drugs were found in 31, central stimulants in 14, cannabinoids in 13 and opioids in nine. None tested positive for gamma-hydroxybutyrate (GHB). In total, 57 patients (22%) suspected proactive DFSA, but only five had findings of sedative drugs that were not accounted for by self-reported voluntary intake. No cases could unequivocally be attributed to proactive DFSA. Among the 120 patients tested for ethanol within 12 h after the assault, 102 were positive. The median estimated blood alcohol concentration (BAC) at the time of assault was 1.87 g/L. Patients testing positive for ethanol more often reported a public place of assault and a stranger assailant. Higher estimated BAC at the time of assault was associated with higher frequency of suspecting proactive DFSA. Ethanol was the most prevalent toxicological finding in urine/blood from victims of sexual assault, and high ethanol concentrations were often detected. Among the patients suspecting proactive DFSA, very few had sedative drug findings not explained by voluntary intake. It seems like opportunistic DFSA, rather than proactive DFSA dominate among the sexually assaulted attending our SAC.

Johansen S. S. (2017). Detection of the antipsychotic drug quetiapine in the blood, urine and hair samples of the victim of a drug-facilitated sexual assault. *Forensic Science International*, 270, e12–e15. DOI: 10.1016/j.forsciint.2016.12.010

A drug rape facilitated with the sedative antipsychotic drug quetiapine is presented here. A teenage girl and her girlfriend went to the home of an adult couple they had met at a bar. Here, the teenage girl (victim) felt tired after consuming some alcoholic drinks and fell asleep. While she was asleep, the others left her at the house alone and returned to the bar. Later, the girl woke up to witness the adult male having intercourse with her, but she was not able to resist the attack. She fell asleep again and slept through the next day and a half, after which she left the house. Forty-three hours after the suspected drug-facilitated sexual assault (DFSA), blood and urine samples were collected and the initial toxicological screening detected quetiapine. Confirmation and quantification by ultra high performance liquid chromatography coupled to tandem mass spectrometry (UHPLC-MS/MS) revealed a concentration of 0.007mg/kg quetiapine in blood and 0.19mg/l in urine. Six months after the DFSA, a hair sample was collected and segmental hair analysis was performed on four washed segments (0-3cm, 3-5cm, 5-7cm, and 7-9cm). The last segment contained 0.011ng/mg of quetiapine, whereas the other segments were negative. The low level of quetiapine in the hair segment and its absence in the other segments indicate that the victim had only consumed one or a few doses of quetiapine within that period and was not a regular user. This study describes the first drug-facilitated assault involving a single dose of quetiapine that was detected by hair, blood and urine analysis. This case illustrates the importance of having very sensitive analytical methods for

measurement of a single dose in blood and urine and how the extended detection window for hair analysis can reveal more information in such cases.

## Comparisons of rape vs. consensual sex

Astrup, B. S., Thomsen, J. L., Lauritsen, J., & Ravn, P. (2012). Detection of spermatozoa following consensual sexual intercourse. *Forensic Science International*, 221(1-3), 137–141. DOI:10.1016/j.forsciint.2012.04.024

*Introduction: In cases of sexual assault, the finding of semen can provide crucial evidence. The presence of spermatozoa serves as proof of a sexual act and may give the identity of the alleged perpetrator through DNA-profiling. In most western countries, there are guidelines for standardized examinations of sexual assault victims. For an objective evaluation of the findings, substantial knowledge of aspects regarding consensual sexual intercourse is crucial. The aim of this study was to examine detection frequencies and genital sampling sites of spermatozoa following consensual sexual intercourse. Methods: In a prospective setting, 60 women underwent forensic examination following consensual sexual intercourse. Specimens were obtained from the external genitalia, the posterior fornix and the cervical canal, and examined using the Papanicolaou stain and standard light microscopy.*

*Results: We found that 88% of possible cases were positive for spermatozoa. The posterior fornix was significantly better than the other sites for detection of spermatozoa and the number of spermatozoa decreased significantly over time. In a large sub-group of women who reported that no intra-vaginal ejaculation had taken place during their latest intercourse, a significant number (14%) had spermatozoa in the vagina. Conclusion: Spermatozoa were best recovered from the posterior fornix, but spermatozoa were also present on swabs taken from the external genitalia.*

*Detection of spermatozoa is thus possible in cases where a speculum examination is denied.*

## Sexually transmitted diseases

Hagemann, C. T., Nordbø, S. A., Myhre, A. K., Ormstad, K., & Schei, B. (2014). Sexually transmitted infections among women attending a Norwegian Sexual Assault Centre. *Sexually Transmitted Infections*, 90(4), 283–289. DOI: 10.1136/sextrans-2013-051328

*Objectives: The objective was to describe the prevalence of sexually transmitted infections (STI) and blood-borne viruses (BBV), and prophylactic treatment offered to female postpubertal patients attending a Norwegian Sexual Assault Centre (SAC). We wanted to evaluate whether STIs diagnosed at the initial visit could have been assault-transmitted, and to explore whether background and assault characteristics were associated with diagnosed STI/BBV. Methods: We included postpubertal females  $\geq 12$  years of age attending the SAC within 1 week of the assault. Data were collected from records. We conducted a retrospective, descriptive study, and used logistic regression analysis. Results: Among 412 patients with a median age of 21 years, 35 patients had an STI (8.5%), two of which probably were assault-transmitted. Chlamydia trachomatis was the dominating agent, detected in 25 patients (6.4%). At serology screening, 3.7% tested positive for hepatitis C and/or hepatitis B core antibody. Patient age 16-19 years was associated with STI, while BBV positives were older.*

*Non-Western assailant was associated with STI, while substance abuse was associated with STI and BBV. In order to prevent potential transmission of STI not identified at the initial visit, 91% accepted prophylaxis against bacterial STI, while antiviral prophylaxis was offered to less than one-fifth of the patients.*

*Conclusions: The *C trachomatis* prevalence among the sexual assault patients was lower than in a comparable clinical population. The STI was suspected to be assault-transmitted in only two cases.*

Skjælaaen, K., Nesvold, H., Brekke, M., Sare, M., Landaas, E. T., Mdala, I., Olsen, A. O., & Vallersnes, O. M. (2022). Sexually transmitted infections among patients attending a sexual assault centre: a cohort study from Oslo, Norway. *BMJ open*, 12(12), e064934. DOI: 10.1136/bmjopen-2022-064934

*Objectives: We estimate the prevalence of sexually transmitted infection (STI) among patients after sexual assault, assess the possible value of azithromycin prophylaxis, and identify risk factors for assault-related STI and for not presenting at follow-up. Design: Prospective observational cohort study. Setting: Sexual assault centre in Oslo, Norway. Participants: 645 patients, 602 (93.3%) women and 43 (6.7%) men, attending the centre from May 2017 to July 2019. Outcome measures: Microbiological testing at the primary examination and at follow-up consultations after 2, 5 and 12 weeks. Estimated relative risk for assault-related STI and for not presenting at follow-up. Results: At primary examination, the prevalence of genital chlamydia was 8.4%, *Mycoplasma genitalium* 6.4% and gonorrhoea 0.6%. In addition, the prevalence of bacterial STI diagnosed at follow-up and possibly from the assault was 3.0% in total: 2.5% for *M. genitalium*, 1.4% for genital chlamydia and 0.2% for gonorrhoea. This prevalence did not change when azithromycin was no longer recommended from January 2018. There were no new cases of hepatitis B, hepatitis C, HIV or syphilis. We found no specific risk factors for assault-related STI. Patients with previous contact with child welfare service less often presented to follow-up (relative risk (RR) 2.0 (95% CI 1.1 to 3.5)), as did patients with a history of sex work (RR 3.6 (1.2 to 11.0)) or substance abuse (RR 1.7 (1.1 to 2.7)). Conclusions: Most bacterial STIs were diagnosed at the primary examination, hence not influenced by prophylaxis. There was no increase in bacterial STI diagnosed at follow-up when azithromycin prophylaxis was not routinely recommended, supporting a strategy of starting treatment only when infection is diagnosed or when the patient is considered at high risk. Sex work, substance abuse and previous contact with child welfare services were associated with not presenting to follow-up.*

## Medical examination

Christoffersen, S. (2011). Immunohistochemical staining of human sperm cells in smears from sexual assault cases. *International journal of legal medicine*, 125(6), 887–890. DOI:10.1007/s00414-011-0612-3

*In the routine clinical examination of sexual assault victims, apart from documenting physical evidence of abuse, securing evidence, typically DNA from blood, semen, or saliva, is an important part of the process. Often the presence of semen is considered a most interesting piece of evidence. Not only does it often contain enough DNA for*

DNA profiling, but it also strongly indicates that an actual sexual act has taken place. The examination of smear slides obtained in sexual assault cases is a time-consuming task especially for the less trained and in cases where the smear only contains few sperm cells. In this work the goal was to develop a procedure to rapidly visualize human sperm cells in smear slides with the use of bright-field microscopy. Using SPERM HY-LITER™ by Independent Forensics, human sperm cells are visualized using a fluorescently labeled mouse antibody which significantly decreases the time used to screen smears. By further using an EnVision+ (DAKO) protocol, it was possible to create an immunohistochemical staining method to visualize sperm cells in bright-field microscopy with the same level of certainty as when using SPERM HY-LITER™.

Ingemann-Hansen, O., & Charles, A. V. (2013). Forensic medical examination of adolescent and adult victims of sexual violence. *Best Practice & Research & Clinical Obstetrics & Gynaecology*, 27(1), 91–102. DOI: 10.1016/j.bpobgyn.2012.08.014

The acute care and examination of a victim of sexual violence must be carried out by a competent forensic examiner in a setting appropriate for crisis intervention, forensic evidence collection, and medical follow up. The aim of forensic evidence and biological material collection is to document an alleged physical or sexual contact between individuals and to corroborate the victim's and the assailant's history. This is why the forensic examiner is expected to be objective and in possession of specialised technical and scientific skills. These skills are addressed and recommendations are made on how to carry out a forensic examination. This includes medical and assault history, top-to-toe examination, biological material collection, and documenting injuries while obtaining the chain of custody. Yet, consensus on time limitations for forensic evidence collection is lacking. Available forensic evidence has been shown to benefit prosecution. To meet the legal system's needs, an interpretation of the findings in a written legal report is mandatory.

## Police procedures

### Reporting to police

Schei, B., Sidenius, K., Lundvall, L., & Ottesen, G. L. (2003). Adult victims of sexual assault: acute medical response and police reporting among women consulting a center for victims of sexual assault. *Acta Obstetrica et Gynecologica Scandinavica*, 82(8), 750–755. DOI: 10.1034/j.1600-0412.2003.00197.x

*Background:* The medical response to adult sexual assault should comprise: the collection of forensic evidence, the treatment of injuries, and follow-up counselling. In the past, victims of sexual assault reporting directly to the police may not have received this total medical care. The Copenhagen Center for Victims of Sexual Assault at Rigshospitalet, Denmark offers a 24-h service. Medical treatment and psychosocial follow up is offered independent of police reporting. The aim of this study was to assess whether adult sexual assault victims who reported to the police differed from those who did not report to the police. *Methods:* Using clinical records, sociodemographics, characteristics of the assault, and type of preventive medical

treatment received were obtained for 156 consecutive women consulting the Copenhagen Center (March 1st to December 31st 2000). Comparisons between characteristics of victims who reported to the police or not were determined. Results: Ninety-four (60.2%) of the women reported to the police. Women who sought services within 24 h of the assault, had experienced use of force, were subjected to assault outdoors, and among whom nongenital injuries were observed were more likely to report to the police ( $p < 0.05$ ). However, in the multivariate model these associations fell below significance, and only the type of perpetrator remained significantly related to police reporting. The adjusted odds ratio for police reporting when the perpetrator was a friend was 0.4 (95% CI 0.17-0.94). There was no statistical difference between the victims who did or did not report to the police to request prophylactic antibiotics or emergency contraception. Conclusion: Observed injuries and requests for prophylactic antibiotics or emergency contraception were not influenced by whether the woman did or did not report directly to the police. Hence the need for medical treatment appears to be similar in the two groups, and available specialized care for victims of sexual assault should not be restricted to those who immediately report to the police.

Davidsson, J., Benjaminsson, G., Wijma, B., & Swahnberg, K. (2009). Association between experiencing rape, police reporting, and self-reported health among women visiting three gynecology clinics in Sweden. *Acta Obstetrica et Gynecologica Scandinavica*, 88(9), 1000–1005. DOI: 10.1080/00016340903147397

*Objective: To describe the frequency of police reporting among rape victims based on two hypotheses: (1) victims of rape more often report poor health than those who have not been victims of any abuse, and (2) victims who report abuse to the police are more likely to state poor self-reported health than those who do not report any abuse. Design: Cross-sectional questionnaire study. Setting: Three Swedish departments of obstetrics and gynecology. Sample: From an original sample of 2,439 women, those who had experienced rape and those who had no history of abuse were included (n=1,319). Method: Analysis of associations between self-reported poor health, rape, and police reporting among rape victims were assessed by multivariate models adjusted for type of abuse, perpetrator, and sociodemographic factors. Main outcome measures: Odds ratios (ORs) for poor health among rape victims. Results: Rape was seldom reported to the police (23.5%, 44/187). Both hypotheses were confirmed; rape victims more often state poor health than non-abused women (adjusted OR 3.9; 95% confidence interval (CI) 2.4-6.3), and women who had reported abuse to the police stated poor health more often than those who had not reported abuse to the police (adjusted OR 3.0; 95% CI 1.1-8.1). Conclusions: Three of four rape victims had not reported any abuse to the police, and those who had were more likely to report poor health. Rape myths are prevalent in society and affect how victims of sexual abuse are treated both by formal and informal support providers, which in turn may affect the recovery and health of victims. Our results send an urgent message to the current debate on sexual abuse against women: Why do women not report rape to the police?*

*Case closed: Rape and human rights in the Nordic countries: Summary report.* (2010). Amnesty International. Retrieved from Social Science Premium Collection

*This report shows that women who report rape to the police in the Nordic countries have only a small chance of having their cases tried by a court of law. The result is that many perpetrators are never held to account for their crimes. Amnesty International examines the gaps in laws, procedures and practices and calls on the governments of Denmark, Finland, Norway and Sweden to take steps to ensure justice for all victims and survivors of sexual crimes.*

Stokbæk, S., Kristensen, C. L., & Astrup, B. S. (2021). Police reporting in cases of sexual assault - a 10-year study of reported cases, unreported cases, and cases with delayed reporting. *Forensic Science, M, and Pathology*, 17(3), 395–402. DOI: 10.1007/s12024-021-00390-0

*The aim of this study was to identify characteristics of reported, later-reported and unreported cases of sexual assault. All cases with female complainants (> 15 years) of sexual assault, who had been examined at the Centre for Victims of Sexual Assault (CVSA) in the Region of Southern Denmark in a 10-year period, were included. Retrospective data were collected from medico-legal examination reports and police reports. Descriptive bivariate analysis and logistic analysis were performed. Forensic pathologists examined 850 complainants of sexual assault in 2009-2018, of which 753 cases were included in this study. Of these, 191 cases (25%) were initially not reported to the police, but 53 women (7%) filed a police report, days, weeks or months later. There was a higher relative risk (RR) of not-reporting for young adults, for single women, if the accused was well known to the complainant, if the complainant experienced amnesia, or if there had been some degree of consensual physical interaction at time of the incident but before the assault. The non-reporters also showed a higher degree of delayed examination. The later-reporters only differed from the non-reporters in one parameter - they had a higher degree of partial amnesia. Interestingly, injuries (ano-genital or other) or verbal/physical resistance was not associated with reporting tendency, reflecting the modus of the local judicial system. The opportunity of a reflection period after a high-quality forensic examination, which is not dependent of police involvement, is essential for sexual assault complainants. Furthermore, education and guidance of victims and of the police and judicial system on the unique nature of sexual assault cases is important.*

## **Police investigation**

Hansen, N. B., Hansen, M., Nielsen, L. H., Bramsen, R. H., Elklit, A., & Campbell, R. (2018). Rape Crimes: Are Victims' Acute Psychological Distress and Perceived Social Support Associated With Police Case Decision and Victim Willingness to Participate in the Investigation? *Violence Against Women*, 24(6), 684–696. DOI: 10.1177/1077801217710002

*This study examined level of acute psychological distress and perceived social support in 64 victims of rape and the association with police case decisions and victims' willingness to participate in the investigation. The results of independent-sample t tests revealed that victims' unwillingness to participate in the investigation was significantly associated with a higher level of psychological distress in the acute phase following the assault. The results suggest that victims of rape who disengage with the police investigation may do so because of a high level of acute psychological distress. Clinical implications are discussed.*

Hansen, N. B., Hansen, M., Campbell, R., Elklit, A., Hansen, O. I., & Bramsen, R. H. (2019). Are rape cases closed because of rape stereotypes? results from a danish police district. *Nordic Psychology*, 71(1), 51-61. DOI: 10.1080/19012276.2018.1470552

*Research shows that the majority of reported rapes is never continued for prosecution but is closed during the police investigation. Studies suggest that rape assaults corresponding to stereotypes about “the real rape” and “the good victim” have a higher likelihood of continuing for prosecution. The aim of the present study was to investigate, if selected characteristics of rape stereotypes influenced investigational outcomes within a Danish police district participating in a multidisciplinary rape response team. The study was based on all reported rapes or rape attempts within a Danish police district over a three-year period (n = 248). Logistic regression analysis was used to investigate, if selected assault and victim characteristics influenced the likelihood of case continuing for prosecution. The following four prominent characteristics of rape stereotypes were selected for investigation: stranger perpetrator, no victim intoxication during the assault, presence of victim resistance and victim physical injuries, respectively. Results indicated that prominent characteristics of rape stereotypes significantly influenced whether the case was continued for prosecution. However, the independent effects of the investigated characteristics were not distinctively supportive of an investigative bias toward rape stereotypes. Even so, no victim intoxication during the assault and more physical injuries were found to increase the likelihood of case continuing for prosecution in this sample of reported rapes. Results are discussed in relation to the possible influence of a coordinated multidisciplinary rape response approach that characterized this sample.*

Vik, B. F., Rasmussen, K., Schei, B., & Hagemann, C. T. (2020). Is police investigation of rape biased by characteristics of victims? *Forensic Science International: Synergy*, 2, 98–106. DOI: 10.1016/j.fsisyn.2020.02.003

*Aim: To explore differences in police investigations between cases of rape against women with and without vulnerability factors. Methods: Retrospective, descriptive study of cases of rape against women ≥16 years of age. Cases involving victims with and without vulnerability factors were compared regarding the quality of police investigation. Results: Vulnerability was present among 68% of the victims. Cases with vulnerable victims had an adjusted odds ratio for a low-quality police investigation of 2.1 (95% CI [1.0-4.4]) compared to cases where victims were non-vulnerable. Conclusions: Our results do not prove that rape myths existed among police officers. Our findings show a trend indicating that vulnerable victims may have been less prioritized compared to non-vulnerable victims. More studies are needed regarding how the police respond to rape complaints and to what degree police investigations are influenced by different characteristics of victims.*

Beck Hansen, N., Nielsen, L. H., Bramsen, R. H., Hansen, O. I., & Elklit, A. (2014). Attrition in Danish Rape Cases. *Journal of Police and Criminal Psychology*, 30(4), 221-228.

*This study investigated attrition in reported rape crimes in the earlier processing phases, including decisions by the police and the prosecution regarding case closure. Furthermore, this study examined potential differences in attrition patterns and legal*

decisions regarding case closure between a group of victims in contact with a specialized multidisciplinary treatment unit for rape victims compared to a group of victims not in contact with this unit. The study was conducted as a case-file analysis of all rape cases reported to a regional Danish police department (n=282) over a three-year period. Most cases were closed in the initial processing phases, with the police closing 61.7 % of the cases and the prosecution closing 53.7 % of the cases referred by the police. Insufficient evidence and the victim's unwillingness to participate in the investigation were important factors for attrition. **We found no significant differences in attrition patterns or legal reasons regarding case closure between the group of victims who had been in contact with the specialized multidisciplinary treatment unit for rape victims and those who had not.** More research is needed to explore effects of specialized multidisciplinary treatment units for rape victims on the legal process following a rape crime.

Nesvold, H., Ormstad, K., & Friis, S. (2011). 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. *Journal of Forensic Sciences*, 56(5), 1156–1162. DOI: 10.1111/j.1556-4029.2011.01879.x

**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.**

### **Legal Outcome (Trial)**

Rohde, M. C., Charles, A. V., Banner, J., & Brink, O. (2006). Rape and attempted rape in Aarhus County, Denmark Police reported and unreported cases. *Forensic Science, Medicine, and Pathology*, 2(1), 33–38. DOI: 10.1385/FSMP:2:1:33

*The aim of this study was to compare medical and nonmedical findings in police reported and unreported cases of rape and attempted rape in the county of Aarhus, Denmark, and to explore whether legal outcomes were influenced by medico-legal findings in the cases reported to the police. Data on rapes and attempted rapes were collected from the files of the Department of Forensic Medicine, police reports, and court files. Eighty-seven victims of alleged rape and attempted rape were included in a 14-month period. Of these, 60% were categorized as date rapes, 23% as stranger rapes, and 16% as partner rapes. Sixteen percent did not report the alleged crime to the police, but still participated in a medico-legal examination. Twenty-nine percent filed police reports, but did not have a medico-legal examination undertaken. Extra-genital lesions were more common among the women who filed police reports (63 vs 43%). **Women who were subjected to date rape and partner rape and had not suffered***



physical injuries were more reluctant to report to the police. Twelve cases were taken to court; 11 offenders were convicted with 1 acquitted. The presence of injuries, vaginal penetration, or the findings of semen, in this study, had not influenced the legal outcome.

Ingemann-Hansen, O., Brink, O., Sabroe, S., Sørensen, V., & Charles, A. V. (2008). Legal aspects of sexual violence-does forensic evidence make a difference?. *Forensic Science International*, 180(2-3), 98–104. DOI: 10.1016/j.forsciint.2008.07.009

A survey was done of 307 alleged victims of sexual violence reported to the police departments in Greater Aarhus, Denmark, in 1999-2004. The legal disposition was ascertained and related to victim and assault characteristics together with the forensic medical and laboratory findings. The police pressed charges in more than half of the cases and 11% turned out to be false allegations. Nineteen percent of all cases ended with sentencing of the defendant. Sperm was detected in 35% of the examined and analysed cases, and in 46% consumption of alcohol prior to the assault was reported. Information in the forensic report regarding injury documentation, intoxication, and detection of sperm and DNA match between victim and alleged assailant did not aid in the prosecution of the case. Severe coercion used by the assailant increased the likelihood of conviction. Intoxication estimation and sperm detection suffered from low sensitivity compared with laboratory analyses. Results suggest the need for new research and optimising the sexual assault examination protocol to strengthen the legal impact of forensic evidence.

Ingemann-Hansen, O., & Brink, O. (2010). Sexual victimisation and legal outcome by documentation of sperm and alcohol. *Injury Prevention*, 16(Suppl 1), A177-A177. DOI: 10.1136/ip.2010.029215.632

From a clinical forensic medicine point of view the trace evidence collected during the medical examination could have impact on the legal outcome. However, significant associations between successful prosecution and evidence of trauma, uses of weapons and severe coercion have been found, but inconsistently. Objective: To ascertain the legal aspects of sexual violence and determine associations between conviction and the medical findings of sperm and alcohol intoxication. Method In total, 307 cases were reported to the police in a well-defined geographical area of Denmark during 1999–2004. Results and Conclusion: Nineteen percent of all cases ended with sentencing of the defendant. Victims reported exposure to moderate/severe coercion in 20% of the cases and 46% reported consumption of alcohol prior to the assault. Sperm was detected in 35% of the examined cases. Injury documentation, intoxication and detection of sperm did not aid the prosecution. In 19% of cases, the forensic clinician did not find sperm detected later by the genetics laboratory. The correlation between self-reported and physician-estimated consumption showed disagreement regarding not reported drinking and estimated influence in 5%, and disagreement regarding reported drinking and estimated no influence in 34% of the cases. Disagreement with the physician-estimated intoxication and the toxicology report was found in 13% of the cases. The varying results of intoxication and sperm detection with missing association to conviction suggest sperm has poor sensitivity in predicting sexual assault. If medical examination should have impact on the legal outcome the examination protocol needs revision.

Stene, L. E., Ormstad, K., & Schei, B. (2010). Implementation of medical examination and forensic analyses in the investigation of sexual assaults against adult women: a retrospective study of police files and medical journals. *Forensic Science International*, 199(1-3), 79–84. DOI:10.1016/j.forsciint.2010.03.016

*Objective: To describe the implementation of medical examination and forensic analysis in the police investigation of sexual assaults, and compare police-reported cases with and without medico-legal examination of the victim. Methods: A retrospective study of all police-reported sexual assaults against women in the county of Sør-Trøndelag, Norway, January 1997-June 2003. Information from the police files was merged with information from the only specialized health care system in the region, the Sexual Assault Care Centre (SACC), St. Olav's Hospital, Trondheim. Results: Of the 185 police-reported cases identified, 101 (55%) involved women examined at the SACC. A medical report was requested in 83% of the latter, while forensic analyses of biological samples from the victim's body were performed in a mere 29%. In cases without examination at the SACC, there was more likely assault outside the city, over one week's delay between the assault and police-reporting, over one assault reported, and assault coded as attempted rape, while vaginal penetration was less likely. Adjusting for delay of reporting, geographical closeness to health care remained predictive of medical examination. Only 16% of the cases were prosecuted. Conclusion: The police requested a medical report in most cases where the victim had undergone examination, while a minority of collected biological samples was analyzed. Consequently, a vigilant and thorough documentation of mental state, physical injuries and history of assault should be emphasized.*

Kjærulff, M., Bonde, U., & Astrup, B. S. (2019). The significance of the forensic clinical examination on the judicial assessment of rape complaints - developments and trends. *Forensic Science International*, 297, 90–99. DOI: 10.1016/j.forsciint.2019.01.031

*Objective: The aim of this study was to investigate the role of the forensic clinical examination in the judicial assessment made by the Prosecution Service in cases of rape. Methods: All cases of police-reported sexual assault in the county of Funen, Denmark in a six-year period were reviewed, and the retrospective data was collected. Cases in which a forensic clinical examination was performed were included. Results: The Prosecution Service in the county of Funen received 348 police-reported rape cases and of these 184 cases were included. The Prosecution Service stated that the forensic clinical examination (FCE) was important for the decision-making process in approximately half of the cases. The Prosecution Service finding an FCE important due to the presence of relevant findings was significantly associated with the case going to trial, whereas importance due to absence of relevant findings was significantly associated with the cases not going to trial. The only single factor associated with a case going to court and a guilty verdict was an FCE of the alleged perpetrator. There were no crude associations between any other factors i.e. the type of assault, victim injuries or alcohol consumption. In a logistic regression model, however, it was significantly more likely ( $p < 0.05$ ) that a forensic clinical examination of the victim was used in the Prosecution Service's decision if there were both anogenital and extra-genital injuries documented, that could originate from the alleged crime. The odds were 7.83 times higher compared to if no injuries were*

detected. The Prosecution Service's use of the clinical examination in their argumentation of the decision of a rape complaint has been significantly increasing from 2003 to 2015. Conclusion: The results of the first in-depth analysis of the overall importance of a forensic clinical examination in cases of rape and sexual assault shows that we need to continuously focus on the documentation of sexual assault, as documentation is part of the decision-making process at all stages of the judicial process.

## Procedures and methods in treatment

### Psychological interventions in treatment

Bragesjö, M., Larsson, K., Nordlund, L., Anderbro, T., Andersson, E., & Möller, A. (2020). Early Psychological Intervention After Rape: A Feasibility Study. *Frontiers in Psychology, 11*, 1595. DOI: 10.3389/fpsyg.2020.01595

Rape is the most common trauma leading to post-traumatic stress disorder (PTSD) among women, with a conditioned prevalence of up to 50%. PTSD is considered to be a lethal condition associated with increased risk of suicide, drug- and alcohol dependence, neurological- and vascular problems, as well as sick leave. Given the scope of this problem, novel and swiftly delivered interventions for this large vulnerable population are clearly warranted. One previous trial conducted in the United States ( $N = 137$ ) showed that an adapted brief version of prolonged exposure (PE) to the fearful memory of the event and situations, provided in the immediate aftermath after trauma (<72 h after a traumatic event), was effective in reducing early PTSD symptoms in rape victims. The aims of the present study were to adapt the brief PE protocol to a Swedish context and investigate its feasibility and delivery in 10 executive patients recruited at the Emergency Clinic for Rape Victims in Stockholm. Ten participants were provided with three sessions of early PE with overall successful results in terms of session attendance, home-work compliance, and also symptom reduction of PTSD and depressive symptoms. However, only a fraction of the screened patients at the Emergency Clinic (5.2%) were eligible to be included in the study, where the majority (40%) were excluded due to the time criteria of 72 h. In this article, we will present detailed results of the intervention and elaborate on how to increase feasibility of preventive interventions for rape victims. In the current form, providing PE with the strict time criteria was not feasible in the clinical setting that constitutes the Emergency Department for rape.

### Study protocol

Haugen, T., Halvorsen, J. Ø., Friberg, O., Simpson, M. R., Mork, P. J., Mikkelsen, G., Elklit, A., Rothbaum, B. O., Schei, B., & Hagemann, C. (2023). Modified prolonged exposure therapy as Early Intervention after Rape (The EIR-study): study protocol for a multicenter randomized add-on superiority trial. *Trials, 24*(1), 126. DOI: 10.1186/s13063-023-07147-w

Sexual assault and rape are the traumatic life events with the highest probability for posttraumatic stress disorder (PTSD), which can have devastating consequences for those afflicted by the condition. Studies indicate that modified prolonged exposure

*(mPE) therapy may be effective in preventing the development of PTSD in recently traumatized individuals, and especially for people who have experienced sexual assault. If a brief, manualized early intervention can prevent or reduce post-traumatic symptoms in women who have recently experienced rape, healthcare services targeted for these populations (i.e., sexual assault centers, SACs) should consider implementing such interventions as part of routine care.*

## **Satisfaction with treatment**

Nielsen, L. H., Hansen, N. B., Elklit, A. (2014). Service Utilization and Satisfaction with Service Providers in Help-Seeking Victims of Rape and Sexual Assault. *US-China Law Review*, 11(9), Serial Number 105.

*The aim of the present study was to investigate service utilization and satisfaction with service delivery among victims of rape and sexual assault. The victims completed a questionnaire comprising questions about whether they felt they received the appropriate help following an assault and whether they were met with positive staff attitudes within the public treatment system. The victims completed the questionnaire at three different time points: one month, three months and six months following an assault. Results showed that a high number of victims were satisfied with the support and treatment they received from psychologist and other part of the public help system. However, a high number of victims also reported receiving insufficient help from the social service and the police. Results are discussed in terms of consequences for victim recovery and the importance of receiving feedback from the victims in order to improve public service provision for victims of rape and sexual assault.*

## **Barriers to help-seeking**

Thorvaldsdottir, K. B., Halldorsdottir, S., Johnson, R. M., Sigurdardottir, S., & Saint Arnault, D. (2021). Adaptation of the barriers to help-seeking for trauma (BHS-TR) scale: a cross-cultural cognitive interview study with female intimate partner violence survivors in Iceland. *Journal of Patient-Reported Outcomes*, 5(1), 22. DOI: 10.1186/s41687-021-00295-0

*Background: Even though traumatization is linked to substantially reduced health-related quality of life, help-seeking and service utilization among trauma survivors are very low. To date, there has not been available in Iceland a culturally attuned, self-reported measure on help-seeking barriers after trauma. This study aimed to translate and cross-culturally adapt the English version of Barriers to Help-Seeking for Trauma (BHS-TR) scale into the Icelandic language and context. Methods: The BHS-TR was culturally adapted following well-established and rigorous guidelines, including forward-backward translation, expert committee review, and pretesting through cognitive interviews. Two rounds of interviews with 17 female survivors of intimate partner violence were conducted using a think-aloud technique and verbal probing. Data were analyzed using qualitative content analysis, a combination of deductive and inductive approaches. Results: Issues with the BHS-TR that were uncovered in the study were classified into four categories related to general design, translation, cultural aspects, and post-trauma context. The trauma-specific issues emerged as a new category identified in this study and included concepts specific to trauma experiences. Therefore, modifications were of great importance-resulting in*

*the scale becoming more trauma-informed.* Revisions made to address identified issues improved the scale, and the process led to an Icelandic version, which appears to be semantically and conceptually equivalent to the original version; additionally, the results provided evidence of content validity. Conclusions: As a cognitive interview study, it adds to the growing cognitive interviewing methodology literature. Furthermore, the results provide essential insights into the self-report response process of trauma survivors, highlighting the significance of making health-related research instruments trauma-informed.

## Health consequences of rape

### Consequences for current health

Larsen, M-L., Hilden, M., Skovlund, C. W., & Lidegaard, Ø. (2016). Somatic health of 2500 women examined at a sexual assault center over 10 years. *Acta Obstetrica et Gynecologica Scandinavica*, 95 (8), 872-878. DOI: 10.1111/aogs.12903

*Introduction.* Sexual assault is a public health issue with many potential short- and long-term consequences for the victims. We aimed to investigate somatic health of women before and after sexual assault. *Material and methods.* We included 2501 women who attended the Centre for Victims of Sexual Assault in Copenhagen, and 10004 women without a known assault experience (controls). Somatic diagnoses were retrieved from the National Health Registry and number of visits to general practitioners from the Danish Health Insurance Registry. Somatic data were assessed during the five-year period before and after the assault. *Results.* The incidence of several somatic disorders was found to be significantly higher for the exposed women than for controls, both before and after the assault. Rate ratios of main disorders before and after the assault were respectively: disease of circulatory and respiratory system: 3.2 (2.6–4.1) and 2.6 (2.1–3.2); epilepsy: 2.9 (2.2–3.8) and 4.1 (3.0–5.6) and disease of the liver: 3.5 (1.9–6.3) and 7.0 (4.4–11.1), respectively. The rate ratios of laparoscopic surgery: 1.5 (0.9–2.5) and 3.4 (2.3–5.0) and of cervical cancer: 0.8 (0.4–1.7) and 2.0 (1.4–3.0) increased significantly after sexual assault. Likewise, the number of visits to a general practitioner was significantly higher in exposed women both before and after the assault (16 vs. 10/year). Complications associated with childbirth were not statistically different between the groups. *Conclusions.* Our results suggest a higher somatic morbidity in women seen at a sexual assault center before as well as after the assault compared with controls.

Moller, A. T., Backstrom, T., Nyberg, S., Sondergaard H. P. & Helstrom L. (2014). Women with PTSD have a changed sensitivity to GABA-A receptor active substances. *Psychopharmacology*, 233(11), 2025–2033. DOI: 10.1007/s00213-014-3776-y

*RATIONALE:* The use of benzodiazepines in treating anxiety symptoms in patients with posttraumatic stress disorder (PTSD) has been debated. Studies on other anxiety disorders have indicated changed sensitivity to GABA-A receptor active substances. *OBJECTIVE:* In the present study, we investigated the GABA receptor sensitivity in PTSD patients. *METHODS:* The participants were recruited from an emergency clinic within 6 months of the most recent rape. Injections of allopreganolone, diazepam, and

flumazenil were carried out, each on separate occasions, in 10 drug naive patients with PTSD compared to 10 healthy controls. Effects were measured in saccadic eye velocity (SEV) and in subjective ratings of sedation. RESULTS: The PTSD patients were less sensitive to allopregnanolone compared with healthy controls. This was seen as a significant difference in SEV between the groups ( $p = 0.047$ ). Further, the patients were less sensitive to diazepam, with a significant less increase in sedation compared to controls ( $p = 0.027$ ). After flumazenil injection, both patients and controls had a significant agonistic effect on SEV, leading to decreased SEV after injection. The patients also responded with an increase in sedation after flumazenil injection, while this was not seen in the controls. CONCLUSIONS: Patients with PTSD have a changed sensitivity to GABA-A receptor active substances. As a consequence of this, benzodiazepines and other GABA-A receptor active compounds such as sleeping pills will be less useful for this group of patients.

### Posttraumatic stress disorder

Ingemann-Hansen, O.I., Elklit, A., Sabroe, S., Vesterby, A., & Brink, O. (2008). Chronic posttraumatic stress in victims of sexual violence. *Scandinavian Journal of Forensic Science*, 14(2), 54-58.

The purpose of this paper was to estimate the prevalence of Post-Traumatic Stress Disorder (PTSD) in sexual victims attending a rape crisis centre, and to examine the interrelationships among victim and assault characteristics, forensic findings, and PTSD. Eight victims completed a questionnaire 2 to 5 years after the assault. Measures included the Harvard Trauma Questionnaire. Forty-five percent met the full PTSD diagnosis. Completed sexual intercourse was identified as a predictor for PTSD development. The results suggest that many victims are suffering from severe health outcomes several years after a sexual assault, indicating a need for follow-up monitoring and intervention.

Elklit, A. & Christiansen, D. (2010) ASD and PTSD in rape victims. *Journal of Interpersonal Violence*, 25(8), 1470-1488. DOI: 10.1177/0886260509354587.

In recent years, a number of studies have investigated the prediction of posttraumatic stress disorder (PTSD) through the presence of acute stress disorder (ASD). The predictive power of ASD on PTSD was examined in a population of 148 female rape victims who visited a center for rape victims shortly after the rape or attempted rape. The PTSD diagnosis based solely on the three core symptom clusters was best identified by a subclinical ASD diagnosis based on all ASD criteria except dissociation. However, a full PTSD diagnosis including the A2 and F criteria was best identified by classifying victims according to a full ASD diagnosis. Regardless of whether cases were classified according to full PTSD status or according to meeting the criteria for the three PTSD core symptom clusters, the classification was correct only in approximately two thirds of the cases. A regression analysis based on ASD severity and sexual problems following the rape accounted for only 28% of the PTSD severity variance. In conclusion, the ASD diagnosis is not an optimal method for identifying those most at risk for PTSD. It remains to be seen whether a better way can be found.

Armour, C., Shevlin, M., Elklit, A. & Mroczek, D. (2011) A Latent Growth Mixture Modelling Approach to PTSD Symptoms in Rape Victims. *Traumatology*, 18(1), 20-28. Doi: 10.1177/1534765610395627.

*The research literature has suggested that longitudinal changes in posttraumatic stress disorder (PTSD) could be adequately described in terms of one universal trajectory, with individual differences in baseline levels (intercept) and rate of change (slope) being negligible. However, not everyone who has experienced a trauma is diagnosed with PTSD, and symptom severity levels differ between individuals exposed to similar traumas. The current study employed the latent growth mixture modeling technique to test for multiple trajectories using data from a sample of Danish rape victims (N = 255). In addition, the analysis aimed to determine whether a number of explanatory variables could differentiate between the trajectories (age, acute stress disorder [ASD], and perceived social support). Results concluded the existence of two PTSD trajectories. ASD was found to be the only significant predictor of one trajectory characterized by high initial levels of PTSD symptomatology. The present findings confirmed the existence of multiple trajectories with regard to PTSD symptomatology in a way that may be useful to clinicians working with this population.*

Shevlin, M. & Elklit, A. (2013). The Latent Structure of PTSD: Different Models or Different Populations? *Journal of Abnormal Psychology*, 121, 610-615.

*Rape victims were characterized by their trauma symptoms being just as easily explained by a numbing model as a dysphoria model. This is opposed to the other three groups; refugees, whiplash sufferers, and parents who had lost an infant. The first two were characterized by a high degree of dysphoria and the last by a high degree of numbing. The results indicate a future need to view PTSD as having a different structure depending on which trauma population it belongs to.*

Elklit, A. & Christiansen, D. (2013). Risk factors for PTSD in female help-seeking victims of sexual assault. *Violence and Victims*, 28, 552-568. DOI: 10.1891/0886-6708.09-135

*Posttraumatic stress disorder (PTSD) is common in the aftermath of rape and other sexual assault, but the risk factors leading to PTSD following rape have been shown to differ from those related to PTSD following nonsexual assault. This prospective study examined risk factors for PTSD severity in 148 female help-seeking victims of sexual assault. Approximately 70% of the victims experienced significant levels of traumatization, with 45% reporting symptoms consistent with a probable PTSD diagnosis. Regression analyses showed that relationship with the assailant, number of assailants, the nature of the assault, perceived positive social support, support satisfaction, feeling let down by others, and prior exposure to sexual trauma did not significantly predict PTSD severity at the final level of analysis. In accordance with suggestions by Dancu, Riggs, Hearst-Ikeda, and Shoyer (1996), it is suggested that this is partly caused by a very high degree of traumatization in the sample. Instead, previous nonsexual traumatic experiences and negative affectivity accounted for 30% of the variance in PTSD severity. Although more research is needed on risk factors of assault-related PTSD, these findings suggest that although sexual assault is associated with a high degree of PTSD severity, prior nonsexual victimization and*

high levels of negative affectivity appear to further increase the vulnerability toward developing symptoms of assault-related PTSD.

Shevlin, M., Hyland, P. & Elklit, A. (2014): Different Profiles of Acute Stress Disorder Differentially Predict Posttraumatic Stress Disorder in a Large Sample of Female Victims of Sexual Trauma. *Psychological Assessment*, 26, 1155-1161. DOI: 10.1037/a0037272

This study aimed to test the dimensional structure of acute stress disorder (ASD). Latent profile analysis was conducted on scores from the Acute Stress Disorder Scale (Bryant, Moulds, & Guthrie, 2000) using a large sample of female victims of sexual trauma. Four distinct classes were found. Two of the classes represented high and low levels of ASD, and the high ASD class was associated with a high probability of subsequent posttraumatic stress disorder (PTSD). There were 2 intermediate classes that were differentiated by the number of arousal symptoms, and the class with high levels of arousal symptoms had a higher risk of PTSD. The results suggested that ASD is best described by qualitatively and quantitatively differing subgroups in this sample, whereas previous research has assumed ASD to be dimensional. This may explain the limited success of using ASD to predict subsequent PTSD.

Elklit, A., Hyland, P. & Shevlin, M. (2014). Evidence of symptom profiles consistent with posttraumatic stress disorder and complex posttraumatic stress disorder in different trauma samples. *European Journal of Psychotraumatology*, 5: 24221. DOI: 10.3402/ejpt.v5.24221

The International Classification of Diseases, 11th version (ICD-11), proposes two related stress and trauma-related disorders, posttraumatic stress disorder (PTSD) and complex PTSD (CPTSD). A diagnosis of CPTSD requires that in addition to the PTSD symptoms, an individual must also endorse symptoms in three major domains: (1) affective dysregulation, (2) negative self-concepts, and (3) interpersonal problems. This study aimed to determine if the naturally occurring distribution of symptoms in three groups of traumatized individuals (bereavement, sexual victimization, and physical assault) were consistent with the ICD-11, PTSD, and CPTSD specification. The study also investigated whether these groups differed on a range of other psychological problems.

Tiihonen Möller, A., Bäckström, T., Söndergaard, H. P., & Helström, L. (2014). Identifying risk factors for PTSD in women seeking medical help after rape. *PloS one*, 9(10), e111136. DOI:10.1371/journal.pone.0111136

**OBJECTIVES:** Rape has been found to be the trauma most commonly associated with Posttraumatic Stress Disorder (PTSD) among women. It is therefore important to be able to identify those women at greatest risk of developing PTSD. The aims of the present study were to analyze the PTSD prevalence six months after sexual assaults and identify the major risk factors for developing PTSD. **METHODS:** Participants were 317 female victims of rape who sought help at the Emergency Clinic for Raped Women at Stockholm South Hospital, Sweden. Baseline assessments of mental health were carried out and followed up after six months. **RESULTS:** Thirty-nine percent of the women had developed PTSD at the six month assessment, and 47% suffered from moderate or severe depression. The major risk factors for PTSD were having been sexually assaulted by more than one person, suffering from acute stress disorder



(ASD) shortly after the assault, having been exposed to several acts during the assault, having been injured, having co-morbid depression, and having a history of more than two earlier traumas. Further, ASD on its own was found to be a poor predictor of PTSD because of the substantial ceiling effect after sexual assaults. CONCLUSIONS: Development of PTSD is common in the aftermath of sexual assaults. Increased risk of developing PTSD is caused by a combination of victim vulnerability and the extent of the dramatic nature of the current assault. By identifying those women at greatest risk of developing PTSD appropriate therapeutic resources can be directed.

Armour, C., Elklit, A., Lauterbach, D., & Elhai, J. D. (2014). The DSM-5 dissociative-PTSD subtype: Can levels of depression, anxiety, hostility, and sleeping difficulties differentiate between dissociative-PTSD and PTSD in rape victims? *Journal of Anxiety Disorders*, 28, 418–426. DOI: 10.116/j.janxdis.2013.12.008

The DSM-5 currently includes a dissociative-PTSD subtype within its nomenclature. Several studies have confirmed the dissociative-PTSD subtype in both American Veteran and American civilian samples. Studies have begun to assess specific factors, which differentiate between dissociative vs. non-dissociative PTSD. The current study takes a novel approach to investigating the presence of a dissociative-PTSD subtype in its use of European victims of sexual assault and rape (N = 351). Utilizing Latent Profile Analyses, we hypothesized that a discrete group of individuals would represent a dissociative-PTSD subtype. We additionally hypothesized that levels of depression, anger, hostility, and sleeping difficulties would differentiate dissociative-PTSD from a similarly severe form of PTSD in the absence of dissociation. Results concluded that there were four discrete groups termed baseline, moderate PTSD, high PTSD, and dissociative-PTSD. The dissociative-PTSD group encompassed 13.1% of the sample and evidenced significantly higher mean scores on measures of depression, anxiety, hostility, and sleeping difficulties. Implications are discussed in relation to both treatment planning and the newly published DSM-5.

Hyland, P., Shevlin, M., Hansen, M., Vallières, F., Murphy, J., & Elklit, A. (2016). The temporal relations of PTSD symptoms among treatment-seeking victims of sexual assault: A longitudinal study. *Journal of Loss & Trauma*, 21(6), 492-506. DOI: 10.1080/15325024.2015.1117933

This prospective study assessed the temporal relationships between the symptom clusters of PTSD in two nonprobability samples of treatment-seeking victims of sexual abuse: rape victims and adult survivors of childhood sexual abuse. Both groups were assessed at three time periods using self-report measures of PTSD symptomology. Findings from two crosslagged panel analyses indicated weak temporal relationships between the symptom clusters of PTSD; however, avoidance and emotional numbing symptoms were found to exert the strongest cross-lagged effects. Avoidance and emotional numbing symptoms were also found to be the strongest predictor of subsequently meeting caseness for PTSD in both samples. Results suggest that there are minimal cross-lagged effects between the PTSD symptom clusters after three months from traumatic exposure.

Hansen, N. B., Hansen, M., Nielsen, L. H., & Elklit, A. (2017). Positive or negative change in outlook on life following sexual assault and associations to PTSD severity. *Sexual and Relationship Therapy, 32*(1), 36-45. DOI: 10.1080/14681994.2016.1169266

*In a sample of female victims of sexual assault (n = 122) this study examined the possibility of a positive or negative change in outlook on life 3 and 12 months following the assault and associations to posttraumatic stress disorder (PTSD). The majority of women reported a negative change or no change in outlook on life following the sexual assault. The group of women who reported a negative outlook on life 3 months following the sexual assault had a significant higher level of PTSD severity 12 months following the assault. More research is needed to enhance our understanding of the causal relationship between life changes and psychological distress following sexual assaults.*

Möller, A., Söndergaard, H. P., & Helström, L. (2017). Tonic immobility during sexual assault - a common reaction predicting post-traumatic stress disorder and severe depression. *Acta Obstetricia et Gynecologica Scandinavica, 96*(8), 932–938. DOI: 10.1111/aogs.13174

*Introduction: Active resistance is considered to be the 'normal' reaction during rape. However, studies have indicated that similar to animals, humans exposed to extreme threat may react with a state of involuntary, temporary motor inhibition known as tonic immobility. The aim of the present study was to assess the occurrence of tonic immobility during rape and subsequent post-traumatic stress disorder and severe depression. Material and methods: Tonic immobility at the time of the assault was assessed using the Tonic Immobility Scale in 298 women who had visited the Emergency clinic for raped women within 1 month of a sexual assault. Information about the assault and the victim characteristics were taken from the structured clinical data files. After 6 months, 189 women were assessed regarding the development of post-traumatic stress disorder and depression. Results: Of the 298 women, 70% reported significant tonic immobility and 48% reported extreme tonic immobility during the assault. Tonic immobility was associated with the development of post-traumatic stress disorder (OR 2.75; 95% CI 1.50-5.03, p = 0.001) and severe depression (OR 3.42; 95% CI 1.51-7.72, p = 0.003) at 6 months. Further, previous trauma history (OR 2.36; 95% CI 1.48-3.77, p < 0.001) and psychiatric treatment history (OR 2.00; 95% CI 1.26-3.19, p = 0.003) were associated with the tonic immobility response. Conclusions: Tonic immobility during rape is a common reaction associated with subsequent post-traumatic stress disorder and severe depression. Knowledge of this reaction in sexual assault victims is important in legal matters and for healthcare follow up.*

Rajan, G., Wachtler, C., Lee, S., Wändell, P., Philips, B., Wahlström, L., Svedin, C. G., & Carlsson, A. C. (2022). A One-Session Treatment of PTSD After Single Sexual Assault Trauma. A Pilot Study of the WONSA MLI Project: A Randomized Controlled Trial. *Journal of Interpersonal Violence, 37*(9-10), NP6582–NP6603. DOI: 10.1177/0886260520965973

*Sexual abuse is a crime with devastating health consequences. Accessible, acceptable and affordable treatment of PTSD after sexual abuse is important. In this pilot study, a one-session PTSD treatment and a modified perspective to PTSD treatment is*

introduced. The aim of the study was to test the efficacy of one session of Modified Lifespan Integration (MLI) on reduction of symptoms of PTSD in individuals with PTSD after one sexual assault. This was a single-center, individually randomized waitlist-controlled treatment study with 1:1 allocation, with the intervention of one 90 - 140 minutes session of MLI and with post-treatment follow-up at 3 weeks (time point two). All participants were females, mean age 24, with PTSD symptoms after one sexual assault during the past 5 years. Exclusion criteria were poor understanding of Swedish, multiple traumas, active substance abuse, active psychosis, ADHD, or autism spectrum disorder. Of 135 interested participants, 38 were finally included, 36 completed baseline measures and were included in the intent to treat analyses and 33 were analyzed per protocol. The primary outcome was the difference between the two trial arms in mean PTSD symptoms as measured by the Impact of Event Scale Revised (IES-R) at time point two. In the intervention arm, 72% no longer scored PTSD in per-protocol analysis, compared to 6% in the waiting list arm. IES-R scores were on average halved in the intervention arm ( $F=21.37$ ,  $P<0.001$ ), but were essentially unchanged in the waiting list arm. No adverse effects or drop-outs were seen. One session of Modified Lifespan Integration was an effective treatment with a low drop-out rate for females aged 15-65 with PTSD after one sexual assault. Provided that this result can be replicated, MLI should be offered to these patients in clinical settings.

### Acute stress disorder

Elklit, A., Due, L. & Christiansen, D. M. (2009). Predictors of acute stress symptoms in rape victims. *Traumatology*, 15(2), 38-45.

Victims of traumatic experiences such as rape often report a variety of symptoms in the acute aftermath of trauma. Reactions to trauma may take the shape of acute stress disorder (ASD), which may later develop into posttraumatic stress disorder, or they may be symptoms of more general distress. The purpose of the present cross-sectional study was to test the hypothesis that symptoms of ASD and general stress, though correlated, represent two independent ways of reacting to trauma. Acute reactions to trauma were examined in a population of 150 female victims of sexual assault. Respondents were interviewed about demographic data and peritraumatic factors and filled out self-administered questionnaires concerning pretraumatic and posttraumatic factors including two dissociative items, ASD symptoms measured by the Acute Stress Disorder Scale and symptoms of general distress measured by a modified version of the Trauma Symptom Checklist. Two separate regression analyses were carried out to examine whether ASD and general distress are mediated by the same variables in the aftermath of rape. Dissociation significantly predicted ASD severity but not general distress, whereas relational problems and functional impairment emerged as significant predictors of general distress but not of ASD symptoms. Thus, even though symptoms of ASD and general distress were highly related to one another, the finding that the variables predicting ASD were different from those predicting general distress supports the assumption that ASD and general distress represent distinct trauma reactions. This finding is in accordance with previous research.

## Long-term health consequences

Elklit, A. & Shevlin, M. (2011). Female Sexual Victimization Predicts Psychosis: A Case-Control Study Based on the Danish Registry System. *Schizophrenia Bulletin*. DOI:10.1093/schbul/sbq048.

*Objective: An increasing research literature has identified a statistical association between trauma exposure and psychosis. Methodological limitations, primarily relating to failures to establish the temporal ordering of events and relying on retrospective self-reports, have made the argument for a causal association difficult to establish. Method: A case-control study was conducted based on data from the Danish Civil Registration System and the Danish Psychiatric Central Register. All female visitors to a rape center during the index year (2003) were matched with controls based on age and area of residence. Information on previous and subsequent diagnoses of psychosis was extracted from the registers for cases and controls. Results: A hierarchical binary logistic regression was used with demographic variables, preindex psychosis, and rape center attendance as predictor variables, and the dependent variable was a postindex year diagnosis of psychosis. The OR associated with sexual victimization (OR 5 10.04; 95% CI 2.50–40.33) indicted an increased likelihood of psychosis while controlling for the other predictors in the model. Conclusions: This study found that sexual victimization significantly increased the likelihood of a diagnosis of psychosis and therefore suggests that there may be a role for traumatic experiences in the etiology of psychosis.*

Elklit, A. & Shevlin, M. (2013) Sexual Victimization and Anxiety and Mood Disorders: A Case Control Study Based on the Danish Registry System. *Irish Journal of Psychological Medicine*, 30(2), 119-124. DOI:10.1017/ipm.2013.9

*This study aimed to examine the relationship between rape and the subsequent psychiatric diagnosis of any anxiety or mood disorder. Data from the Danish Civil Registration System and the Danish Psychiatric Central Register were used to identify a sample of female victims who had visited a centre for rape victims during an index year and their subsequent psychiatric records were compared with a matched control group. While controlling for demographic variables and previous psychiatric disorders, the effect of sexual victimization increased the likelihood of a subsequent diagnosis of an anxiety disorder but not a mood disorder. Sexual victimization significantly increases the likelihood of experiencing an anxiety disorder, and therefore victims require post-assault information and support.*

Tryggvadottir, E., Sigurdardottir, S., & Halldorsdottir, S. (2019). 'The self-destruction force is so strong': male survivors' experience of suicidal thoughts following sexual violence. *Scandinavian Journal of Caring Sciences*, 33(4), 995–1005. DOI: 10.1111/scs.12698

*Suicidal thoughts are common among male sexual violence survivors. However, very few studies have focused specifically on this aspect. The purpose of this study was to explore the experience of male survivors themselves of suicidal thoughts following sexual violence within the framework of men and masculinity. The research methodology was The Vancouver School of Doing Phenomenology, and a total of 17 interviews were conducted with seven male survivors. The main findings of the study are that the source of the suicidal thoughts after sexual violence is based on an*

experienced strong self-destruction force that involves almost unbearable and unexpressed suffering. The strong self-destruction force appeared among other things in risk behaviour and negligence towards own life and health. Participants all agreed that the thought of suicide was a certain escape route, that is to be constantly trying to escape from oneself and inner suffering. Negative thoughts that were difficult to suppress developed into suicidal thoughts that developed into thinking about the best possible way to commit suicide. Shattered self-esteem, shame and loneliness characterised the lives of participants, and they felt disgusting and worthless as human beings. Much self-degradation was characteristic. Perceived common societal norms about male masculinity had major negative impact on participants, for example that they should not show emotions because they were men and therefore should not express emotional pain or disclose their traumas. This resulted in emotional silencing. Disclosing the violence proved extremely difficult for all participants, but they experienced a high level of positive energy following disclosure. Participants experienced lack of knowledge, understanding and appropriate support from healthcare professionals and felt that sexual violence survivors' trauma history needed to be better explored within health care. It is important that professionals acquire knowledge and understanding of male sexual violence survivors, and their suicidal thoughts, and become able to provide trauma-specific support.

Sigurdardottir, S., & Halldorsdottir, S. (2021). *Persistent Suffering: The Serious Consequences of Sexual Violence against Women and Girls, Their Search for Inner Healing and the Significance of the #MeToo Movement*. *International Journal of Environmental Research and Public Health*, 18(4), 1849. DOI: 10.3390/ijerph18041849

*This paper uses the method of theory synthesis, primarily from our own previous studies and psychoneuroimmunology research, with the aim of exploring and better understanding the consequences of sexual violence for women and their search for inner healing. The impact of the #MeToo movement is also examined. The main finding is that sexual violence causes persistent suffering for women and girls. In childhood and adolescence, the main consequences include a feeling of unbearable secrecy, threat and humiliation; disconnection of body and soul; great fear and constant insecurity; damaged self-image, self-accusation and guilt; experiencing being compelled to take full responsibility for the crime; as well as various physical and mental health problems, e.g., suicidal thoughts. In adulthood, the consequences are also multifaceted and varied, including vaginal problems, recurrent urinary tract infections, widespread and chronic pain, sleeping problems, chronic back problems, and fibromyalgia, eating disorders, social anxiety, severe depression, and chronic fatigue. In conclusion, sexual violence has these extremely negative and long-term consequences because of the interconnectedness of body, mind, and soul. The seriousness of the consequences makes a trauma-informed approach to services essential to support the healing and improved health and well-being of survivors.*

### **Pregnancy as a result of rape**

Gisladdottir, A., Harlow, B. L., Gudmundsdottir, B., Bjarnadottir, R. I., Jonsdottir, E., Aspelund, T., Cnattingius, S., & Valdimarsdottir, U. A. (2014). Risk factors and health during pregnancy among women previously exposed to sexual violence. *Acta Obstetrica et Gynecologica Scandinavica*, 93(4), 351–358. DOI: 10.1111/aogs.12331

*Objective: To determine whether women exposed to sexual violence in adolescence or adulthood are at increased risk of adverse maternal characteristics during subsequent pregnancies. Design: Register-based cohort study. Setting: Iceland. Population: We identified 586 women who attended a Rape Trauma Service (RTS) between 1993 and 2008 and all subsequent births of these women up to April 2011 (n = 915). These pregnancies were compared with 1641 randomly selected pregnancies of women who had not attended the RTS and who gave birth during the same calendar month. Methods: Information on maternal smoking, body mass index and illicit drug use was obtained from maternal charts. We used Poisson regression to obtain multivariable adjusted relative risks (aRR) with 95% CI contrasting prevalence of outcomes in the two groups. Main outcome measures: Characteristics and risk factors during pregnancy, including maternal smoking, body mass index, weight gain during pregnancy, illicit drug use. Results: Compared with unexposed women, sexually assaulted women were younger and more often primiparous in subsequent pregnancy, more likely not to be employed (7.8% vs. 4.3%; aRR 2.42, 95% CI 1.49-3.94), not cohabiting (45.6% vs. 14.2%; aRR 2.15, 95% CI 1.75-2.65), smokers (45.4% vs. 13.5%; aRR 2.68, 95% CI 2.25-3.20), and more likely to have used illicit drugs during pregnancy (3.4% vs. 0.4%; aRR 6.27, 95% CI 2.13-18.43). Exposed primiparas were more likely to be obese (15.5% vs. 12.3%; aRR 1.56, 95% CI 1.15-2.12). Conclusions: Women with a history of sexual violence are more likely to have risk factors during pregnancy that may affect maternal health and fetal development.*

Gisladottir, A., Luque-Fernandez, M. A., Harlow, B. L., Gudmundsdottir, B., Jonsdottir, E., Bjarnadottir, R. I., Hauksdottir, A., Aspelund, T., Cnattingius, S., & Valdimarsdottir, U. A. (2016). Obstetric Outcomes of Mothers Previously Exposed to Sexual Violence. *PloS one*, 11(3), e0150726. DOI: 10.1371/journal.pone.0150726

*Background: There is a scarcity of data on the association of sexual violence and women's subsequent obstetric outcomes. Our aim was to investigate whether women exposed to sexual violence as teenagers (12-19 years of age) or adults present with different obstetric outcomes than women with no record of such violence. Methods: We linked detailed prospectively collected information on women attending a Rape Trauma Service (RTS) to the Icelandic Medical Birth Registry (IBR). Women who attended the RTS in 1993-2010 and delivered (on average 5.8 years later) at least one singleton infant in Iceland through 2012 formed our exposed cohort (n = 1068). For each exposed woman's delivery, nine deliveries by women with no RTS attendance were randomly selected from the IBR (n = 9126) matched on age, parity, and year and season of delivery. Information on smoking and Body mass index (BMI) was available for a sub-sample (n = 792 exposed and n = 1416 non-exposed women). Poisson regression models were used to estimate Relative Risks (RR) with 95% confidence intervals (CI). Results: Compared with non-exposed women, exposed women presented with increased risks of maternal distress during labor and delivery (RR 1.68, 95% CI 1.01-2.79), prolonged first stage of labor (RR 1.40, 95% CI 1.03-1.88), antepartum bleeding (RR 1.95, 95% CI 1.22-3.07) and emergency instrumental delivery (RR 1.16, 95% CI 1.00-1.34). Slightly higher risks were seen for women assaulted as teenagers. Overall, we did not observe differences between the groups regarding the risk of elective cesarean section (RR 0.86, 95% CI 0.61-1.21), except for a reduced risk among those assaulted as teenagers (RR 0.56, 95% CI 0.34-0.93).*

*Adjusting for maternal smoking and BMI in a sub-sample did not substantially affect point estimates. Conclusion: Our prospective data suggest that women with a history of sexual assault, particularly as teenagers, are at increased risks of some adverse obstetric outcomes.*

### **Sexual function after assault**

Högbeck, I., & Möller, A. (2022). Female sexual function six months after sexual assault: post-traumatic stress disorder strongest risk factor for impaired function. *Journal of Sex & Marital Therapy*, 48(2), 112–120. DOI: 10.1080/0092623X.2021.1958964

*In this study, we investigate the effect of sexual assault on sexual function in adult women. Participants consisted of 136 women recruited from the Emergency Clinic for Rape Victims in Stockholm. Seventy-three women returned for follow-up six months after the assault and completed the Female Sexual Function Index, assessing their current sexual function compared to that before the assault. A majority (44/73) reported impaired function, which was associated with a simultaneous diagnosis of PTSD (OR 5.7; 95% CI 1.7-19.1,  $p = .005$ ) or moderate-severe depressive symptoms (OR 4.6; 95% CI 1.6-13.7,  $p = .006$ ). 27% of women reported improved function.*

### **Particular vulnerability in rape victims**

Elklit, A., & Shevlin, M. (2009). Sexual victimization as a risk factor for residential mobility. *Public Health*, 123, 502-505.

*Objectives: Increased residential mobility has been proposed as an undesirable consequence for the victims of sexual victimization. This study aimed to test the hypothesis that serious sexual victimization predicted high levels of residential mobility after controlling for previous levels of residential mobility. Study design: A case-control design was used. Data were from the Danish civil registry system. Methods: All females who had visited a centre for rape victims over a 1-year period were identified, and demographic information was collected based on the Danish civil registry number. A control group of 20 women for each rape victim with the same age and living in the same municipality in the year of the rape was also used. Results: The results indicate that attendance at the centre for rape victims, higher previous levels of residential mobility and being single significantly increase the likelihood of subsequent high residential mobility. Conclusions: Sexual victimization has a unique and significant role in predicting residential mobility, above and beyond the influence of previous residential mobility.*

Elklit, A. & Shevlin, M. (2010). General Practice Utilization after Sexual Victimization: A Case Control Study. *Violence against Women*, 16(3), 280-290.

*There is a growing research literature that indicates that sexual victimization results in increased physical health problems and health service utilization. This study aimed to examine the relationship between attendance at a center for rape victims and frequency of contact with general practitioners. The study used matched case-control design, and information about general practitioner use over a 7-year period was*

*drawn from the Danish Civil Registration System. There was a sustained increase in health care use for those who had used the center for rape victims compared to the control group.*

Elklit, A. & Shevlin, M. (2010). Family structure as a risk factor for sexual victimization. *Archives of Sexual Behavior*, 39, 1375-1379. DOI: 10.1007/s10508-009-9555-x.

*This study estimated the risk of sexual victimization associated with different family structures. Based on the Danish Civil Registration System, all female visitors to the Centre for Rape Victims (CRV) at the University Hospital in Aarhus, during a two-year period (January 2005 to December 2006) were identified (N = 214) along with a control group (N = 4,343) that was matched by age and residential location. The family structure in the preceding year was used as a predictor variable in a logistic regression model. Results indicated that, compared to those who were married with children at home, being single with children at home significantly increased the likelihood of having visited the CRV. This is consistent with the research literature that has shown that single women with children are at risk for disadvantage on a range of socioeconomic and psychological factors as well as at risk for interpersonal violence.*

Demant, J., & Heinskou, M. B. (2011). Taking a Chance: Sex, Alcohol and Acquaintance Rape. *YOUNG*, 19(4), 397-415. DOI: 10.1177/110330881101900403

*This article analyzes the meaning of alcohol in relation to young people's sexuality, with focus on acquaintance rape. Drinking is a way to stage oneself as mature; it is intentionally used by both male and female youth to make sexual pleasure possible. It is argued that in the context of sexuality among young people, there is a fine line between freedom and gender-specific restrictions. The research on acquaintance rape and alcohol drinking among the youth is traditionally dominated by the concept of risk. This article introduces the concept of chance, along with risk, to grasp the complexities of the grey zone situations of acquaintance rape among the youth. The risk of social stigma within the gender game increases with drinking alcohol simultaneously as the chances of expanding the limitations of gender roles also increase with drinking. These social stigmas, embedded in the gender roles, are central to understanding when a pleasurable situation turns into an acquaintance rape. The article is based on 95 police reports of rape and 37 focus groups on alcohol and sexuality of the Danish youth. The analysis takes it onset in a single case.*

Vik, B. F., Nöttestad, J. A., Schei, B., Rasmussen, K., & Hagemann, C. T. (2019). Psychosocial Vulnerability Among Patients Contacting a Norwegian Sexual Assault Center. *Journal of Interpersonal Violence*, 34(10), 2138-2157. DOI: 10.1177/0886260516659657

*In this study, the objective was to assess the occurrence of specific vulnerability factors among adult and adolescent females attending a Norwegian sexual assault center (SAC). We also explored assault characteristics and investigated whether these characteristics differed between the group of patients with vulnerability factors compared with the group without such factors. We conducted a retrospective descriptive study of 573 women  $\geq 12$  years of age attending the SAC at St. Olavs*



*Hospital, Trondheim, Norway, between July 1, 2003 and December 31, 2010. A patient was considered vulnerable if at least one of the following features was present: intellectual or physical disability; history of present/former mental health problems; history of present/former alcohol/substance abuse; or former sexual assault. At least one vulnerability factor was present in 59% of the cases. More than one vulnerability factor was present in 29%. Reporting at least one vulnerability factor was associated with a higher patient age, unemployment, a higher frequency of reported light/moderate physical violence, and the documentation of minor body injury. In contrast, those without vulnerability more often were students assaulted during night time, by a casual or stranger assailant and reporting a higher intake of alcohol prior to the assault. There are obvious patterns of differences in the nature of sexual assaults reported among victims with specific vulnerability factors compared with victims without these factors. Future research should address these differences and possible solutions for better protection of especially vulnerable individuals against sexual offenses, such as those with mental health and substance abuse difficulties.*

Hansen, M., Stefansen, K., & Skilbrei, M. (2021). Non-reporting of sexual violence as action: Acts, selves, futures in the making. *Nordic Journal of Criminology*, 22(1), 42-57. DOI: 10.1080/2578983X.2020.1867401

*Individual, cultural and structural barriers exist in reporting rape to the police. Our study's context is Norway, where reporting is more accepted than before and is even encouraged. Still, few who experience rape report the incident. Based on 15 qualitative interviews we examine how women who refrain from reporting rapes give their choice meaning. We draw from Boltanski and Thévenot's version of cultural sociology, especially the idea that meaning-making in concrete situations relates to wider 'regimes of justification': particular framings that render choices and interpretations intelligible. The aftermath of rape leaves women with having to balance their own and others' needs and expectations. In talking about the rape and how they afterwards manoeuvre to reconcile conflicting norms and needs, the women activate two different regimes of justification; an instrumental and an ontological. They negotiate between expectations set out in an instrumental regime of justification, focusing on acts and actions, and a more ontological regime of justification, wherein focus lies on their sense of self and future identities. They position themselves as 'evolving selves', a position from where they are able to prevent further ruptures by deploying a developmental logic rather than answering the call to 'do the right thing' and report.*

Bach, H. M., Hansen, N. B., Ahrens C. & Hansen, M (2022): Giving voice: experiences and needs of sexual assault survivors facing multiple adversities, *Nordic Psychology*, DOI:10.1080/19012276.2022.2141838

*Although specialized sexual assault services have been established throughout the world to better meet survivors' needs, many survivors remain underserved. Survivors who are simultaneously experiencing additional adversities (e.g. survivors with mental illness and/or substance abuse) appear particularly underserved by formal support systems. The present study therefore set out to explore the formal help-seeking experiences and needs of survivors facing various adversities apart from the sexual*

**assault.** Interviews were conducted with five survivors seeking formal support for sexual assault in Denmark. Interviews were analyzed using Interpretive Phenomenological Analysis. Five themes are presented: 1) “Sexual Assault as Lived Experience,” 2) “Survivors’ Needs,” 3) “Accessing Sexual Assault Services,” 4) “SAC-Therapy,” and 5) “The Criminal Justice System.” Theme 1 made evident that the experience of sexual assault and its aftermath is deeply personal and contextual. Themes 2–5 demonstrate how such personal and contextual aspects impact service utilization and needs. Implications and recommendations are provided. Above all, meeting survivors’ needs will require a more person-centered approach that acknowledges the unique context of survivors’ sexual assault experiences.

### **Intimate partner sexual assault**

Alsaker, K., Morken, T., Baste, V., Campos-Serna, J., & Moen, B. E. (2012). Sexual assault and other types of violence in intimate partner relationships. *Acta Obstetrica et Gynecologica Scandinavica*, 91(3), 301–307. DOI: 10.1111/j.1600-0412.2011.01336.x

*Objective:* To investigate whether sexual assaults are more likely to co-occur with some types of abuse rather than others in violent intimate relationships.  
*Design:* Cross-sectional study. *Setting:* A self-administered questionnaire was sent to all Norwegian women's shelters. *Population:* Women seeking refuge at Norwegian women's shelters in 2002 and 2003. *Methods:* Sexual assault and experiences of intimate partner violence were measured using the Severity of Violence against Women Scale (SVAWS) and psychological violence was measured using the Psychological Maltreatment of Women Inventory (PMWI). *Main outcome measures:* Student's t-test analyses were performed between the mean values of the different acts of reported violence, and linear regression analyses were used to examine the association between sexual violence and the other forms of violence reported. *Results:* Sexual violence correlated significantly with the other eight categories in SVAWS, and with violence directed at the pregnant woman's abdomen and psychological violence in PMWI. When we adjusted all categories for each other by linear regression analysis, sexual intimate partner violence was significantly associated with hair pulling, arm twisting, spanking or biting, dominance and isolation abuse and violence directed at the pregnant woman's abdomen.  
*Conclusion:* Sexual assaults are more likely to co-occur with some types of physical and psychological violence than with others. This knowledge may be important for improving our understanding of sexual violence in intimate partner relationships and in the efforts to detect intimate partner violence. Bruises, loss of hair and bite marks may suggest that sexual acts were committed against the victim's will.

### **Dating violence in youth**

Bramsen, R. H., Lasgaard, M., Koss, M. P., Elklit, A., & Banner, J. (2012). Adolescent sexual victimization: A prospective study on risk factors for first time sexual assault. *European Child and Adolescent Psychiatry*, 21, 521-526.

*The present study set out to investigate predictors of first time adolescent peer-on-peer sexual victimization (APSV) among 238 female Grade 9 students from 30 schools*

in Denmark. A prospective research design was utilized to examine the relationship among five potential predictors as measured at baseline and first time APSV during a 6-month period. Data analysis was a binary logistic regression analysis. **Number of sexual partners and displaying sexual risk behaviors significantly predicted subsequent first time peer-on-peer sexual victimization**, whereas a history of child sexual abuse, early sexual onset and failing to signal sexual boundaries did not. The present study identifies specific risk factors for first time sexual victimization that are potentially changeable. Thus, the results may inform prevention initiatives targeting initial experiences of APSV.

## Specific groups in rape

### Male victims of sexual assault

Larsen, M. L., & Hilden, M. (2016). Male victims of sexual assault; 10 years' experience from a Danish Assault Center. *Journal of Forensic and Legal Medicine*, 43, 8–11.  
DOI:10.1016/j.jflm.2016.06.007

*This study aims to provide descriptive data regarding male victims of sexual assault seen at the Centre for Victims of Sexual Assault in Copenhagen, Denmark. All 55 male victims attending the center in the time period of March 2001 until December 2010 underwent a standardized data collection. Data included information on the victim and the sexual assault. **Male victims accounted for less than 2% of the total number of visits to the center** in this time period. Fifty three percent were between 15 and 24 years. In all cases the perpetrator was male, and 25% were assaulted by more than one perpetrator. Of the 62% of male victims who gave information on sexual orientation, 36% reported themselves as heterosexuals. A total of 45.5% had an alcohol intake of more than 5 units in the hours before the assault. Forty two percent reported the assault to the police. **The male victims differed from female victims in several ways; they were more often assaulted by a stranger; more likely to be assaulted by more than one perpetrator; more likely being victim of drug rape; less likely to have experienced previous sexual abuse and less willing to report their assault to the police.** Being victim of a sexual assault by another man is considered a taboo subject and it is likely that the dark figure of men exposed to sexual assault is much higher than it is for women. Strengthening our knowledge regarding male victims of sexual assault is necessary to improve both primary and secondary preventive measures in order to make male victims feel safe in coming forward. Male victims should have equal access to both medical and psychological help as female victims.*

### Relation to perpetrator

Friis-Rødel, A. M., Leth, P. M., & Astrup, B. S. (2021). Stranger rape; distinctions between the typical rape type and other types of rape. A study based on data from Center for Victims of Sexual Assault. *Journal of Forensic and Legal Medicine*, 80, 102159. DOI: 10.1016/j.jflm.2021.102159

*Objective: The aim of this descriptive cohort study was to characterize stranger rape compared to other types of rape. Method & materials: All cases of women aged 12 years or older, who contacted a Center for Victims of Sexual Assault in the region of Southern Denmark and underwent a forensic examination in 2018, were collected and analyzed. Descriptive frequencies, Pearson's  $\chi^2$ -test and Fisher's exact-test were performed. Results: Compared to other types of rape, stranger rape were reported to the police more frequently, earlier and more frequently independently, without contact to family, friends or other authorities. In cases of stranger rape women were exposed to threats and violence more often, and clinical findings were found to coincide with the women's report more frequently. Regarding the offenders' level of planning, it was not possible to find significant differences between stranger rape and other rape types by comparing frequencies of the offenders' use of condoms and weapons and/or other remedies as surrogate markers for degree of planning. Conclusion: There were several significant characteristic differences between stranger rape and other types of rape. Characterizing the 'archetypical rape' in opposition to other and more frequent types of rape, may give the public, the police, the courts and aid organizations the background needed to understand the importance of rape typologies when handling cases of sexual assault.*

Vik, B. F., Rasmussen, K., Schei, B., & Hagemann, C. T. (2020). Three groups of suspects in police reported rape cases: First-time suspects, recidivists and unidentified suspects. A comparative study. *Journal of Forensic and Legal Medicine*, 71, 101771. DOI: 10.1016/j.jflm.2019.02.004

*Background: Previous studies show that reported suspects in adult rape cases often have a criminal record, and that many are rape recidivists. Annual numbers of police reported rapes have dramatically increased but the proportion of rapes being prosecuted and numbers of convictions are low. To increase knowledge about the suspects in cases of police reported rapes; whether they have committed the crime before or not may inform preventive measures. Aims: To compare suspect, victim, and assault related characteristics among different groups of police-reported rape suspects (first-time suspects, recidivist suspects and unidentified suspects). Methods: Retrospective, descriptive study of suspects in cases of rape or attempted rape reported by women  $\geq 16$  years of age in the Sør-Trøndelag police district, Norway, from 2003 to 2010. Results: Among the 356 suspects included, 207 (58%) were first-time suspects, 75 (21%) were recidivists and 74 (21%) were unidentified. Being a first-time suspect was significantly associated with victim being  $< 18$  years, recidivist suspect was significantly associated with victim being a partner, both suspect- and victim unemployment, and suspect reporting intake of other drugs than alcohol. When suspects were unidentified, victims were more likely to have consumed alcohol prior to assault, and reporting the suspect being of non-Western origin. Also, the reporting of a public venue was more frequent when unidentified suspect. Conclusions: The study shows different patterns in groups of suspects as to victim and assault characteristics. Detection and description of such differences can provide valuable information for future prevention programs, police investigation methods and health care guidelines.*

## Attitudes toward rape victims

Elklit, A. (2002) Attitudes Towards Rape Victims. *Journal of Scandinavian Studies in Criminology and Crime Prevention*, 3(1), 73-83.

*The present study assessed the contribution of gender, age, education and traumatic experiences on attitudes toward rape victims. The Attitudes Toward Rape Victims Scale (ARVS) was completed by 312 website visitors who entered the Danish website: www.voldtaegt.dk. The site is designed to meet the needs of rape victims in acute distress as well as the needs of the public and of professionals. The analysis of ARVS showed a three-dimensional factor structure. Males had less favorable attitudes toward rape victims than did women; but attitudes became more favorable as age and education increased. The experience of rape, accidents and losing someone close also influenced the attitudes in a favorable direction. The data analysis is equivalent to the more traditionally collected samples, which gives credibility to the use of website-based studies of attitudes. The Danish sample had more favorable attitudes toward rape victims than a Singaporean student sample, a US male student sample and an Australian student sample, but less favorable than a US female student sample. The ARVS seems to be a valuable and sensitive instrument for cross-cultural research in victimology.*

Bendixen, M., Henriksen, M., & Nøstdahl, R. K., (2014) Attitudes toward rape and attribution of responsibility to rape victims in a Norwegian community sample, *Nordic Psychology*, 66:3, 168-186, DOI: 10.1080/19012276.2014.931813

*There has been a steady increase in the number of rapes reported to the police in Norway during the past two decades. In this paper we examine factors associated with attitudes toward rape (as measured with 11 items from the Illinois Rape Myth Acceptance Scale) and attribution of responsibility to rape victims using a community sample of Norwegian women and men. Analyses of 475 returned questionnaires (32.6% response rate) suggest that men's attitudes toward rape were moderately less disapproving than women's, and that men attributed slightly more responsibility to rape victims than did women. Analysis showed that classical sexism was the strongest predictor of attitudes toward rape, followed by acceptance of intimate partner violence toward women and that rape attitudes were the prime predictor of attribution of responsibility to rape victims. Although Scandinavian countries are consistently ranked among the World's most gender egalitarian societies, the findings from our study do not differ from those from the North American culture with regard to the strengths of known group differences and attitudinal correlates to rape attitudes and attribution of responsibility. Theoretical and practical implications are discussed.*

Adolfsson, K., Strömwall, L. A., & Landström, S. (2020). Blame Attributions in Multiple Perpetrator Rape Cases: The Impact of Sympathy, Consent, Force, and Beliefs. *Journal of Interpersonal Violence*, 35(23-24), 5336–5364. DOI: 10.1177/0886260517721171

*Victims of multiple perpetrator rape (MPR) have been found to be an especially vulnerable group. This study examined effects of MPR and perpetrators' use of force on attributions of victim and perpetrator blame. In two large experiments (total N = 2,928), Swedish community members read scenarios depicting an MPR and*

subsequently made several ratings of blame, rape myth acceptance (RMA), just world beliefs, sympathy for the victim, perception of consent, and trust in the legal system. Data were analyzed with a multianalytical approach using both analyses of variance as well as exploratory analyses. In Experiment 1, more blame was attributed to a victim of MPR than a victim of a lone perpetrator rape (LPR). In Experiment 2, no effect of used force was found on levels of attributed blame. In both experiments, hierarchical multiple regression analyses indicated that four components, identified through principal components analyses, explained substantial shares of the variance in both victim and perpetrator blame. The best individual predictors were participants' perception of consent, sympathy for the victim, and RMA. The study shows the importance of studying participants' beliefs and attitudes about rape and that victim-blaming research needs both theory development and greater methodological awareness. Implications for victim support services are also discussed.

### **Relatives' attitudes towards victims of rape**

Christiansen, D., Bak, R. & Elklit, A. (2012). Secondary victims of rape. *Violence and Victims*, 27(2), 246-262, 2012. DOI: 10.1891/0886-6708.27.2.246

Rape is often a very traumatic experience, which affects not only the primary victim (PV) but also his/her significant others. Studies on secondary victims of rape are few and have almost exclusively studied male partners of female rape victims. This study examined the impact of rape on 107 secondary victims, including family members, partners, and friends of male and female rape victims. We found that many respondents found it difficult to support the PV and that their relationship with the PV was often affected by the assault. Furthermore, the sample showed significant levels of traumatization, and it was estimated that approximately one quarter of the respondents suffered from posttraumatic stress syndrome (PTSD). Degree of traumatization was associated with a more recent assault, higher efforts to support the PV, recurrent thoughts about having been able to prevent the assault, a lack of social support for the respondent, and feeling let down by others. The respondents were generally interested in friend-, family-, and partner-focused interventions, particularly in receiving education about how best to support a rape victim.

### **Prevention**

Pedersen, B. M., & Stormhøj, C. (2019). Subjects in Gendered Constellations of Spiralling Disempowerment: Situated Personal Meanings of Rape and other Forms of Sexualized Coercion. *Annual Review of Critical Psychology (Online)*, 16, 1108-1141.

Personal perspectives on having been subjected to rape or other forms of sexualized coercion as well as its meanings/consequences in everyday life are sparsely researched in mainstream psychology. Furthermore, questions of gender, power and participation and their connections to personal perspectives are also rarely explicitly nor critically investigated. Similarly, gendered aspects of sexualized coercion are frequently underestimated in common everyday discourses. Thus, it is crucial to explore how questions of gender and power may be interwoven in this psycho-social phenomenon and its meanings. Therefore, we investigate: 1. Intersecting societal aspects of gender, power and participation, their connections to women being subjected to sexualized coercion, and the concept of (dis)empowerment. 2. Situated,

personal and common meanings/consequences of concrete incidents of coercion for women having been subjected to them. 3. Connections between being subjected to coercion and being a subject and participant in this context of action. Our article is part of an exploration of 1st person perspectives of women who have asked for assistance at Centre for Victims of Sexual Assault in Copenhagen. The exploration is informed by an attempt at connecting approaches from critical and feminist social theory and from the approach of *Kritische Psychologie*.

Our analysis indicates how situated societal conditions may result in 'spirals of disempowerment' through which women experience a sustained loss of agency during and after incidents of coercion. The analysis underscores the necessity of conceptualizing connections between societal and situated conditions of 'power over' and 'power to' in gendered relations of relative dominance and subordination, sexualized coercion, (dis)empowerment, and possibilities for participation. As a consequence, and by pointing to, as well as developing inclusive agency-oriented support initiatives, psychosocial conceptualizations and practices may avoid contributing to disempowering spirals feeding on victimisation, individualisation, psychologisation, and pathologisation.

Johansen, K. B. H., Pedersen, B. M. & Tjørnhøj-Thomsen, T. (2020) "You can Feel that on the Person" – Danish Young People's Notions and Experiences of Sexual (Non)Consenting, *NORA - Nordic Journal of Feminist and Gender Research*, 28:1, 4-17. DOI: 10.1080/08038740.2019.1685593

This paper seeks to gain insight into the experiential dimensions of sexual consent as the basis for distinguishing sex from a sexual violation. Based on focus group and individual interviews with young people in Denmark we seek to explore how sexual experiences are co-constituted by discourses and experiences. We do this by exploring how young people interpret, what we conceptualize as consenting vis-à-vis non-consenting to sex and analysing how these notions are present in, or resisted by, experiences of unwanted sex. Drawing on Andrew Sayer's needs-based conceptualization of human beings with a capacity for "emotional reason", we show that young people's notions of consenting is conditioned by a situated "sensing" based on care for the other. Secondly, we show that when and for whom to care for may be related to the relational context, the opportunity for individual pleasure and homosocial recognition. This leaves room for two inconsistent notions of non-consenting. Finally, we suggest that sexual violations may not be based on miscommunication but a lack of commitment to "sensing," informed by gendered dispositions to act on opportunism.

### **Sexual assault victims participating in research**

Bramsen, R. H., Lasgaard, M., Koss, M. P., & Elklit, S. (2010). The development and psychometric assessment of the adolescent sexual coercion risk scale. *Journal of Interpersonal Violence*, 26, 1524-1540.

The objective of this study was to develop a psychometric measure of risk for sexual victimization from adolescent peers. Items were generated on the basis of the literature and on consultations with a multidisciplinary group of key informants. The

items were administered to a sample of 327 female Grade-9 students and examined using exploratory factor analysis. The Adolescent Sexual Coercion Risk Scale items formed two lower-order factors composed of items regarding signaling sexual boundaries and displaying risk behaviors, respectively. Subsequent confirmatory factor analysis supported the two factors, and preliminary psychometric analyses demonstrated that the factors have satisfactory internal consistency. In addition, low scores on the ability to signal sexual boundaries and high scores on risk behaviors were associated with self-reported peer sexual victimization, supporting the validity of the factors as measures of risk. Future validation and potential usage of the measure are discussed.

Pedersen, B. M. (2011). Trauma and Symbolic Violence: A 1st person perspective approach to meanings of sexualised coercion. *Journal für Psychologie*, 19(3), 1 -22.

*Our understanding of 'reactions to trauma' is dominated by concepts like Post-Traumatic Stress Disorder. The use of such concepts has been criticised but simultaneously integrated, in folk-psychology. Connecting emotional and cognitive processes as well as acts – such as in gendered practices – to praxis, and drawing on the concept of symbolic violence, this article contributes to their critique. In order to develop the analysis of difficulties victims may experience, they will be reconceptualised using critical psychological concepts such as 1st person perspectives and participation. The analysis seeks to undertake a discussion of personal meanings attributed to 'traumatisation'. It raises questions as to whether concepts of this kind and related practices may constitute symbolic violence and contribute to victimisation through processes of looping. Furthermore it aims to unfold an understanding inclusive of connections between societal practices, aspects of symbolic violence, and the conduct of lives. The analysis is based on an empirical study of victimisation through rape and other forms of sexualised coercion.*

Nielsen L.H., Hansen M., Elklit A. & Bramsen R.H. (2016). Sexual Assault Victims Participating in Research: Causing Harm When Trying to Help? *Archives of Psychiatric Nursing*, 30(3), 412-417. DOI: 10.1016/j.apnu.2016.01.017

*For fear of causing unnecessary distress, ethical concerns have been raised in regard to asking vulnerable persons e.g. sexually traumatized victims to participate in scientific research studies. The current study investigates how victims of sexual assault perceived participating in scientific research in regard to victims' psychological and/or physiological distress and potential beneficial outcomes from participation (N=51). Results from interviews with victims indicated that the majority of victims of sexual assault who had taken part in the study considered their participation in research a positive experience causing little short- or long-term psychological or physiological distress. In addition, over half of the respondents reported some benefits from participation.*

### **Sexual assault in gynecological settings**

Wijma, B., Schei, B., Swahnberg, K., Hilden, M., Offerdal, K., Pikarinen, U., Sidenius, K., Steingrimsdottir, T., Stoum, H., Halmesmäki, E. (2003). Emotional, physical, and sexual abuse in



patients visiting gynaecology clinics: a Nordic cross-sectional study. *Lancet (London, England)*, 361(9375), 2107–2113. DOI: 10.1016/s0140-6736(03)13719-1

*Background: Abuse against women causes much suffering for individuals and is a major concern for society. We aimed to estimate the prevalence of three types of abuse in patients visiting gynaecology clinics in five Nordic countries, and to assess the frequency with which gynaecologists identify abuse victims. Methods: We did a cross-sectional, multicentre study of women attending five departments of gynaecology in Denmark, Finland, Iceland, Norway, and Sweden. We recruited 4729 patients; 3641 (77%) responded and were included in the study. Participants completed a postal questionnaire (norvold abuse questionnaire) confidentially. Primary outcome measures were prevalences of emotional, physical, and sexual abuse, and whether abused patients had told their gynaecologist about these experiences. We assessed differences between countries with Pearson's chi(2) test. Findings: The ranges across the five countries of lifetime prevalence were 38-66% for physical abuse, 19-37% for emotional abuse, and 17-33% for sexual abuse. Not all abused women reported current ill-effects from the abusive experience. Most women (92-98%) had not talked to their gynaecologist about their experiences of abuse at their latest clinic visit. Interpretation: Despite prevalences of emotional, physical, and sexual abuse being high in patients visiting gynaecology clinics in the Nordic countries, most victims of abuse are not identified by their gynaecologists. This lack of discussion might increase the risk of abused patients not being treated according to their needs. Gynaecologists should always consider asking their patients about abuse.'*

Swahnberg, K., Wijma, B., Wingren, G., Hilden, M., & Schei, B. (2004). Women's perceived experiences of abuse in the health care system: their relationship to childhood abuse. *BJOG : an International Journal of Obstetrics and Gynaecology*, 111(12), 1429–1436. DOI: 10.1111/j.1471-0528.2004.00292.x

*Objectives: The aim of this study was to determine whether there was an association between any lifetime experiences of emotional, physical and/or sexual abuse and perceived abuse in the health care system. Furthermore, we wanted to ascertain if adult victims of perceived abuse in the health care system reported exposure to childhood emotional, physical and/or sexual abuse more often than non-victims did. Design: A cross sectional questionnaire study. The first hypothesis was tested in the total sample, and the second hypothesis in a case-control analysis. The cases were those women who reported perceived experiences of abuse in the health care system as adults. Exposure was defined as experience of emotional, physical and/or sexual abuse in childhood. Settings: Three Swedish gynaecological clinics. Sample: A total of 2439 gynaecology patients (response rate 81%). Methods: Postal questionnaire. Main outcome measure: Associations between experiences of emotional, physical and/or sexual abuse, and perceived abuse in the health care system; all operationalised in The NorVold Abuse Questionnaire (NorAQ). Results: A general association was found between lifetime experiences of emotional, physical and/or sexual abuse and perceived abuse in the health care system. Adult victims of abuse in the health care system reported experiences of emotional, physical and/or sexual abuse in childhood more often than non-victims did. These findings also held after adjustment for age and*

educational level. Conclusions: We found associations between experiences of any lifetime abuse and perceived abuse in the health care system. Adult victimisation in the health care system was associated with childhood exposure to emotional, physical and/or sexual abuse. These associations call for attention and need to be further investigated.

Swahnberg, K., Schei, B., Hilden, M., Halmesmäki, E., Sidenius, K., Steingrimsdottir, T., & Wijma, B. (2007). Patients' experiences of abuse in health care: a Nordic study on prevalence and associated factors in gynecological patients. *Acta Obstetrica et Gynecologica Scandinavica*, 86(3), 349–356. DOI: 10.1080/00016340601185368

*Background:* In an earlier Swedish study conducted with The NorVold Abuse Questionnaire, we found that one-third of female patients who had experienced adult abuse in health care (AAHC) had a background of childhood emotional, physical and/or sexual abuse (EPSA) ('revictimised'). But since the majority of women with AAHC were 'new victims' without such a background, there might be other factors associated with AAHC. The present study aimed to map prevalence of abuse in health care (AHC), and associated variables among new victims and revictimised patients. *Methods:* We carried out a cross-sectional questionnaire study at 5 Nordic gynecological clinics. Associations between AAHC and other variables were tested in a multivariate model in 4 groups of women with adult EPSA, childhood EPSA, childhood and adult EPSA, and no EPSA. *Results:* The response rate was 77% (n=3,641). The overall prevalence of any lifetime experience of AHC was 13-28%. High educational level, physical complaints, post-traumatic stress symptoms, and sleeping problems were associated with AAHC in women without EPSA (new victims). Poor self-rated health was strongly associated with AAHC in the 3 groups of women with EPSA. *Conclusion:* AHC is commonly reported by gynecological patients in the Nordic countries, but not yet properly explored or understood. The most important factors associated with AAHC were high educational level and poor self-rated health.

Pikarinen, U., Saisto, T., Schei, B., Swahnberg, K., & Halmesmäki, E. (2007). Experiences of physical and sexual abuse and their implications for current health. *Obstetrics and Gynecology*, 109(5), 1116–1122. DOI: 10.1097/01.AOG.0000259906.16474.86

*Objective:* To estimate the prevalence of a history of physical and sexual abuse in adulthood among gynecological patients and the association with general and reproductive health. *Methods:* A cross-sectional questionnaire study on abusive experiences of gynecologic outpatients in a tertiary hospital. The total sample size was 691. *Results:* Of all women, 42.4% had experienced moderate or severe physical or sexual abuse as an adult. One hundred forty-seven (21.6%) women reported physical abuse, 84 (12.3%) sexual abuse, and 58 (8.5%) both. The abused and nonabused women did not differ in mean age, education, or parity. Sexually abused women and those who were both sexually and physically abused reported poor general health significantly more often (P=.005 and P=.001, respectively) than the nonabused. They also rated their sex life as significantly worse than the nonabused women (P=.002 and P=.012, respectively). Over half of abused women had experienced common physical complaints during the previous 12 months compared with one third of the nonabused (P<.001). Two thirds of both the abused and the

*nonabused women preferred that their gynecologist not ask directly about abuse. Conclusion: Abusive experiences were common in gynecologic outpatients. Women with abusive experiences had ill health and poor sexual life more often than the controls. In contrast to the results of previous studies, most of the women did not want to be asked about abuse by their gynecologist.*

### **Chapter in e-book:**

C. Hagemann, K. Kero, P. Brusila, H. F. Thornhill, A. Möller, M. Hilden, et al. (2021) Violence against women. In: *Obstetrics and Gynecology*. NFOG textbook for medical students, Nordic federation of Societies of Obstetrics and Gynecology Vol. 1 Pages 28

<https://www.sundhed.dk/sundhedsfaglig/opslag-og-vaerktoejer/laereboeger/obstetrics-gynecology/gynecology/g-60-violence-against-women/>

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