



Research Reviews

AFN Journal Club Research Reviews

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AFN Journal Club Research Reviews

The AFN Journal Club meets regularly to review the quality of the evidence available to support our clinical practice. This is a core requirement of professional practice.

AFN Journal Review Criteria

- Evidence tables are for the review of studies that may have implications for clinical practice.
- All articles on this table have been reviewed by the AFN Journal Club.
- Abbreviations are listed in the legend following the reviews.

Melnik Levels of Evidence (Melnik & Fineout-Overholt, 2015)

Level 1 - Systematic review & meta-analysis of randomized controlled trials; clinical guidelines based on systematic reviews or meta-analyses

Level 2 - One or more randomized controlled trials

Level 3 - Controlled trial (no randomization)

Level 4 - Case-control or cohort study; correlation design; examines relationships

Level 5 - Systematic review of descriptive & qualitative studies

Level 6 - Single descriptive or qualitative study; does not examine relationships

Level 7 - Expert opinion

Legend

SA=Sexual Assault; EC=Emergency Contraception; FN=Forensic Nurse; SANE=Sexual Assault Nurse Examiner; MFE=Medical Forensic Exam; LNG=Levonorgestrel/Plan B; UPA=Ulipristal acetate/Ella; AGI=Anogenital Injury; CSI=Consensual Sexual Intercourse; RR=Risk Ratio; TB=Toluidine Blue; ACEP=American College of Emergency Physicians; DV=Domestic Violence; NCCCJ=National Commission on COVID-19 and Criminal Justice; ED=Emergency Department; HT=Human Trafficking

Completed Reviews

Downing NR, Avshman E, Valentine JL, Johnson LM, Chapa H. Forensic Nurses' Understanding of Emergency Contraception Mechanisms: Implications for Access to Emergency Contraception. *J Forensic Nurs.* 2023 Jul-Sep 01;19(3):150-159. doi: 10.1097/JFN.0000000000000430. Epub 2023 Mar 12. PMID: 37590937.

Study Description: Estimated 25,000 pregnancies result from SA in the United States annually. As many as 95% of SA related pregnancies could be prevented by timely administration of EC. Numerous professional healthcare organizations endorse offering EC as an integrated aspect of post SA care. However, lack of knowledge surrounding EC's mechanism of action, including misinterpreting ECs as abortifacients, might restrict patient access to this important healthcare option; this study sought to evaluate FNs' understanding.

Literature Review: 39 references; 15 were older than 10 years but all pertained to subject matter

Design/Methods/Fidelity: Cross-sectional descriptive survey design; the survey consisted of 12 questions administered via Qualtrics (questions from survey can be found in Table 1 of article). Participation was voluntary after reading informed consent. Survey questions included demographic questions, (SANE certification, geographic area of practice, years of clinical practice, age range, gender, and MFE volume), and questions about EC (whether they prescribed EC and the most common brand of EC administered). Participants were also asked to report their level of agreement or disagreement that LNG or UPA had the ability to disrupt an established pregnancy and whether their prescribing of EC would increase, decrease, or not change after the Supreme Court ruling overturning *Roe v. Wade*. At the end of the survey, participants had the option to describe questions or concerns about providing EC.

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Sample/Setting: Participants were recruited; total of 173 survey respondents. All but two were from U.S. (other two from Canada, whereby *Roe v. Wade* wouldn't have applied). 103 of the survey respondents were recruited from a FN conference in Texas, so it is unclear if that majority of responses were affected by location of that conference. Would have been helpful to ask which state/region the respondent was from as different states have different laws that could affect practice and understanding of EC. Also, the reviewers would have liked to see a question pertaining to if respondent works at a religious/faith-based institution to see if there was any correlation/causation to certain types of responses.

Analysis: Descriptive statistics were calculated for demographic variables. Differences in beliefs about the ability of EC to disrupt an established pregnancy by type of EC were analyzed using chi-square tests, combining “agree” and “strongly agree” and combining “disagree” and “strongly disagree”. Chi-square was used to examine whether demographic variables were associated with type of EC prescribed, beliefs about EC disrupting an established pregnancy, and if providing EC would change after the overturn of *Roe v. Wade*.

Results/Limitations: 96.53% reported they prescribed/dispensed EC at the time of MFE with LNG prescribed more frequently than UPA (57.8% vs. 38.2%, respectively). More participants disagreed/strongly disagreed with the statement that LNG had the ability to disrupt an established pregnancy compared with UPA (83.2% vs. 78.6%). Almost four-fifths of participants stated their dispensing of EC would not change after the overturning of *Roe v. Wade*, but almost 13% were unsure how the ruling would impact their administration of EC; participant age seemed to have an association with belief that EC disrupted an established pregnancy (no participants 21–29 years old, 13% 30–34 years, and 11.5% over 35 years agreed/strongly agreed that LNG disrupts an established pregnancy). Limitations include low sample size/survey response limited to one professional organization; survey questions could have been written in such a way to influence responses; and only two responses from outside U.S., so not generalizable to non-U.S. FNs.

Clinical Significance/Practice Implications: It is crucial for FNs to understand EC and provide accurate information to their patients; clearly a gap in understanding mechanism of EC in FNs and likely all healthcare providers, so FNs have an obligation to provide knowledge and education to their healthcare colleagues. This article may be a catalyst for further studies on larger FN sample sizes and even general nurses outside of FN scope.

Evidence Level: Level 6

Naumann, DN, Morris, L, Bowley, DM, Appleyard, T-L, Cumming, J & Wardle, D (2023). Anogenital injury following sexual assault and consensual sexual intercourse: a systematic review and meta-analysis. *EClinicalMedicine*, vol. 65, 102266. <https://doi.org/10.1016/j.eclinm.2023.102266>

Study Description: The aim of this systematic review was to compare rates of identification of AGI in women following SA and CSI using the same examination techniques. Reviewed existing literature over past 30 years including pre- and post-pubertal ages.

Literature Review: 46 references; half were more than 5 years old. 12 included in the introduction of article; remainder of references were cited later in the study but not used as part of the final 10 used in the systematic review. Many that are older are classic works and cited regularly. All are applicable to subject matter.

Design/Methods/Fidelity: Systematic review and meta-analysis; relevant studies (in any language, with no age or sex criteria) published between February 25, 1993 and February 25, 2023 that directly compared AGI between individuals after either SA or CSI. Abstracts, conference proceedings, and case reports were excluded, as well as studies that didn't compare findings with both SA and CSI (i.e. included control). Data were extracted by two authors and discrepancies re-examined and resolved by consensus.

Sample: 10 studies, accounting for 3,165 study participants. Of ages reported, the range was 10-85 years, although 2 of the articles didn't include age ranges. The 10 were published from 1997 to 2022 in the U.S., UK, Australia, Denmark, and Thailand. All participants were female and the majority were reported as White in 7 of the studies. All studies reported naked eye examinations of the external genitalia, 8 used magnification, and 6 used TB. 8 studies included examination of the internal genitalia; 6 used colposcopy to augment the examination. 4 studies included anal examination; 2 included anoscopy. All studies reported that the examiners were experienced in conducting forensic examinations following SA.

Analysis: Mantel-Haenszel method used for meta-analysis using random effects modelling to determine the RR of AGI between SA and CSI. Newcastle–Ottawa scale tool used to assess risk of bias. I^2 statistic used to determine heterogeneity among studies. An $I^2 > 75\%$ was considered high heterogeneity. Funnel plots used to assess the risk of publication bias, by determining any visually apparent asymmetry. Concluded that 3 of the articles were good, 1 was fair, and 6 were poor. The studies at greatest risk of bias tended to score poorly on comparability, largely because of lack of controlling for differences between SA and CSI groups.

Results/Limitations: AGI was detected in 901 (48%) of 1,874 participants following SA and 394 (31%) of 1,291 participants following CSI. Meta-analysis of all included studies demonstrated that the presence of AGI was significantly more likely for participants following SA than CSI (RR 1.59 [95% CI 1.21, 2.09]; $p < 0.001$). There was a significant heterogeneity among studies. Although AGI was significantly more likely to be detected after SA than CSI, more than half of survivors of SA have no detectable injuries. Of the three studies deemed good, reported outcomes of 1,149 participants were 531 were survivors of SA; 40% of SA survivors had AGI and 26% of participants having CSI had AGI. There was no significant difference in the risk of AGI in these groups for this subgroup analysis (RR 1.10 [95% CI 0.94, 1.30]; $p = 0.25$). Heterogeneity was very low in this analysis ($I^2 = 0\%$). Limitations include majority being White and all being female. Not generalizable to males, non-Whites, and non-binary people.

Clinical Significance/Practice Implications: AGI may occur during CSI and/or SA. Neither presence nor absence of AGI proves that SA has or has not occurred. Clinicians and other professionals involved in the care and support of SA survivors must be explicit

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in their reassurance to the patient that lack of evidence of AGI in no way reduces the credibility of their account of SA. Appreciate that myths were addressed in the discussion.

Evidence Level. Level 5

Whiteman PJ, Macias-Konstantopoulos WL, Relan P, Knopov A, Ranney ML, Riviello RJ. *Violence and Abuse: A Pandemic Within a Pandemic. Western Journal of Emergency Medicine.* 2023 Jul 17;24(4):743-750. doi: 10.5811/westjem.58405. PMID: 37527378; PMCID: PMC10393453.

Study Description: Expert commentary reviewed the literature on the effect the pandemic had on domestic violence, child and elder abuse and neglect, human trafficking, and gun violence. Stay-at-home or shelter-in-place order had been implemented to help stop the spread of the virus, and although well-intentioned, one unintended adverse consequence was an increase in violence, abuse, and neglect. This became, and remains, a public-health crisis within a crisis. In early 2021, ACEP Public Health and Injury Committee was tasked with reviewing the impact the pandemic had on violence and abuse as the result of a resolution passed at the 2020 ACEP Council meeting.

Literature Review: 50 references; 1 from 2003, and remaining in past 5 years

Design/Methods/Fidelity: Literature review; experts in the topics of DV, child abuse and neglect, human trafficking, elder abuse and neglect, and gun violence came together to summarize the literature available regarding the COVID-19 pandemic and its impact on these topics. Part of a resolution from ACEP.

Sample/Setting: 50 references used in the literature review

Analysis: Not Applicable

Results/Limitations: Anecdotal reports:

DV—In February 2021, the NCCCJ reported that DV incidents in the U.S. increased by 8.1% after lockdown orders were issued, hotline calls increased 9–10%, ED visits decreased overall; homicides related to DV increased; in 2020 more than 2,000 people were killed in the U.S. in DV-related shootings, an increase of 4% from 2019, with disproportionate increases in Texas (69%), Maryland (93%), Missouri (67%), and Utah (160%).

Child Abuse/Neglect—A report from the U.S. Centers for Disease Control and Prevention found that despite a dramatic decrease in total pediatric ED visits during lockdown, the number of hospitalizations from child abuse and neglect remained stable, representing a dramatic increase in the yearly percentage of ED visits related to child abuse and neglect among all age groups; in 2020 there was a 23% increase in hotline calls.

Elder Abuse/Neglect—Before COVID-19, an estimated 1 in 6 older persons were subject to abuse globally with one in 10 U.S. residents ≥ 60 years subject to abuse; one study post-COVID reported an increase of 1 in 5.

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HT/Exploitation—In May 2020, during the first wave of shutdowns, reports to tipline numbered almost 1.7 million, as compared to $\approx 745,000$ reports in May 2019; reports involving at-risk children from across the country increased by 28%.

Gun Violence—The pandemic has been associated with increased firearms purchasing both by experienced owners and first-time buyers. With the start of the pandemic, a surge in U.S. gun sales was tied to stay-at-home orders and the first wave of pandemic-related unemployment. Women and Blacks showed the greatest increases in firearm purchasing; firearm assault in the U.S. increased by 8.1%. Limitation included that authors doing lit search were not blinded; available quantitative data is limited so relied on anecdotal evidence.

Clinical Significance/Practice Implications: It is evident that measures meant to help control the spread of the COVID-19 pandemic had many unintended consequences and placed people at risk for violence. The pandemic left abuse and violence victims feeling isolated with fewer options for help and decreased opportunities for recognition. Frontline clinicians need to screen appropriately and have substantive training in abuse/neglect red flags; know mandatory reporting obligations, maintain connections with community resources/partners to mitigate disruptions in advocacy, and crisis follow up. Preserving or expanding access to services, strengthening social service agency partnerships; utilizing FNs in ED and community settings.

Evidence Level: 7

Reference

Melnyk, B. M., & Fineout-Overholt, E. (2015). *Evidence-based practice in nursing and healthcare: A guide to best practice*. Wolters Kluwer.