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RESEARCH ARTICLE

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Pain Perceptions and Management in Outpatient Gynecological Procedures: Survey Insights and Future Implications

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ABSTRACT

Objective: This analysis investigates patient experiences regarding pain management during gynecological procedures through a comprehensive survey, aiming to address the lack of clear guidelines in the clinical landscape and emphasize the importance of effective pain management strategies in enhancing patient care and satisfaction.

Design: A cross-sectional survey with 258 respondents assessed pain management experiences during gynecological procedures. The survey was distributed *via* Qualtrics, and 258 responses were obtained.

Participants/materials, setting, methods: Participants provided demographic information and responded to questions regarding contraceptive methods, procedures undergone, pain management discussions, anxiety levels, and willingness to accept pain management interventions. Confidentiality and informed consent protocols were strictly observed throughout the study.

Results: Most female respondents reported diverse contraceptive methods and procedures. Pain management discussions and provisions varied, with a significant portion reporting never being offered pain management. Many experienced anxiety and pain during procedures, with varying intensities, that were not addressed or discussed by their treating provider. Most expressed willingness to accept pain management interventions.

Limitations: This study relies on self-reported data, potentially introducing recall bias, and has limited generalizability due to its cross-sectional design.

Conclusion: Findings reveal a significant gap in pain management provision and discussion during gynecological procedures. Improved guidelines and practices are necessary to address patient discomfort effectively. Standardized pain management protocols are important to enhance patient experiences and outcomes, with further research needed to customized strategies to individual patient needs.

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KEYWORDS
Pain management; Gynecological procedures; Patient experiences; Contraceptive methods; Healthcare provider communication

Introduction

Gynecologic contraception implants and injections have been growing in popularity over the years in all age groups and demographics, including income, education, and ethnicities in the United States [1-3]. The rising prevalence of these treatments is primarily attributed to their superior effectiveness, long-lasting protection, and the convenience of not having to actively manage them daily. Additionally, improved access and insurance coverage following the enactment of the Affordable Care Act (ACA) have contributed significantly to their increased use [4,5]. However, despite the pain of undergoing these minor procedures, the discussion of pain management or standardization of pain control has yet to follow. Many gynecological procedures, including insertion of Long-Acting Reversible Contraception (LARC), colposcopies, biopsies, endometrial ablations, hysteroscopies, and dilation and curettages, are performed in the outpatient setting. These procedures can cause patients variable amounts of pain. One study showed that one-third of patients getting Intrauterine Devices (IUDs) experienced a severe level of pain, and yet it has been shown that clinicians tend to be poor judges of how much the procedure is causing pain for their patients [6,7]. Although ambulatory gynecological procedures are safe and provide valuable clinical benefits for treatment and diagnosis, the failure rate is most often due to pain [8].

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Research for pain control for gynecological procedures does exist. However, many studies do not conclude one method for comprehensive pain control but suggest a multimodal and targeted approach emphasizing the importance of patient counseling and open patient-provider discussions [9-11]. Safe utilization of analgesia and anesthesia in this setting largely relies on the provider's training, access to appropriate equipment, and understanding of patient candidacy [12]. Ultimately, this lack of definiteness in the research has led to unclear current clinical guidelines on using analgesia and anesthesia techniques for outpatient gynecologic procedures.

The absence of clear national guidelines may contribute to a lack of emphasis on pain management discussions in gynecological care, which our study aimed to discover. This deficiency can be traced back to historical gender bias in pain perception, where women's pain experiences are often minimized or overlooked, perpetuated by a predominantly male-dominated medical approach [13,14].

Without clear protocols in place, healthcare providers may adopt disparate approaches to pain management based on their individual preferences or clinical experiences or choose not to discuss pain management in an outpatient setting at all. This study aims to better understand the patient experience with pain during various gynecological procedures and determine the current clinical landscape of discussing or using analgesia techniques despite the lack of guidelines.

Herein, we highlight a critical clinical consequence of insufficient medical research, focus, and effort to establish clear guidelines, resulting in inadequate addressing of patients' pain during gynecological outpatient procedures. This inconsistency can result in suboptimal pain control for some patients and may contribute to disparities in healthcare delivery.

Materials and Methods

Survey design and distribution

The survey was designed to assess experiences, preferences and future implications in decisions related to pain management during gynecological procedures. This aimed to gather insights into the use of contraceptive methods, experiences with in-office gynecological procedures, pain management communication, and provision, anxiety related to gynecological procedures, and the impact of pain management on the choice of contraceptive methods.

Inclusion criteria for the study were defined as follows: Participants must be 18 years of age or older, be able to comprehend and appropriately respond to the survey questions, and provide informed consent before participation. Exclusion criteria included individuals under 18, those who did not provide informed consent, and those deemed unable to comprehend or respond to the survey questions, thereby ensuring ethical compliance and the reliability of the collected data.

Qualtrics was used to distribute the survey. Participants were recruited from several social media platforms for a wide distribution nationwide. The survey comprised 15 questions, including demographic inquiries and detailed questions regarding gynecological healthcare experiences, specifically focusing on pain management and contraceptive method choices. Social media platforms were utilized to get a wide distribution across the country.

Participant demographics

The survey garnered 258 responses, with detailed demographic information provided by 254 participants. Most respondents were within the age range of 18-34, predominantly identified as female (253 out of 254), and mostly White or Caucasian (200 out of 254). The demographic section of the survey also captured information on race/ethnicity and gender identity.

Survey content

The questionnaire explored several key areas:

- **Contraceptive use:** Respondents were asked about their current or previous use of various contraceptive methods.
- **Gynecological procedures:** Questions about the types of in-office procedures participants had undergone, such as colposcopies and Intrauterine Device (IUD) insertions, were included.
- **Pain management:** The survey inquired about healthcare providers' discussions and provisions of pain management before, during, and after gynecological procedures.
- **Anxiety and pain experience:** Participants were asked about their experiences of anxiety and pain related to gynecological procedures, including the severity of any pain experienced.
- **Pain management and contraceptive choices:** Additional questions assessed whether the provision of anesthesia/sedation/pain medication would influence the respondents' choices regarding IUD or subdermal hormonal implant contraceptives.

Data analysis

Data collected from the survey were analyzed to understand the prevalence of different contraceptive methods, experiences with gynecological procedures, and the role of pain management in these experiences. The analysis focused on identifying patterns related to the provision and discussion of pain management and its impact on the anxiety experienced by patients and their choices regarding contraceptive methods.

Results

Contraceptive methods reported by respondents included birth control pills (165 responses) and condoms (150 responses), while common in-office procedures cited were pap smears (208 responses) and IUD insertions (88 responses).

Discussion of pain management by healthcare providers varied among respondents, with 58.4% reporting never discussing it before gynecological procedures. Pre-procedural anxiety was prevalent, with 75% of respondents answering yes to its presence, while 72.9% reported experiencing pain during procedures, categorized as mild (16.5%), moderate (31.8%), or severe (25.5%) and no pain experienced 23.5%.

Regarding acceptance of anesthesia, sedation, or pain medications, 122 respondents (47.8%) expressed willingness, with 107 (42%) indicating a possibility. In considering IUD or subdermal hormonal implant contraceptive options, 35 respondents expressed willingness without pain management, while 114 would consider if pain was managed with anesthesia/sedation/medication.

Among individuals with existing IUDs or subdermal hormonal implants, only 47 respondents (18.4%) were willing to undergo the procedure again without pain management, while 61 (23.9%) were not. In considering if pain management was an option for IUDs or hormonal implants, 107 of respondents would consider these options. These findings provide insights into pain management experiences from a patient perspective, emphasizing the need for further research to inform clinical practices and enhance patient care (Table 1).

Table 1. Responses to survey question, percent frequency calculated out of 258 responses.

Q: How often has pain management been discussed by your provider prior to your gynecological procedure?	
Response	**Percent frequency**
Never	58.4%
Sometimes	25.9%
About half the time	4.3%
Most of the time	5.9%
Always	2.7%
Q: If you already have an IUD or subdermal hormonal implant, would you undergo the procedure again with out pain management?	
Response	**Percent frequency**
No	23.9
Yes	18.4
N/A	57.6
Q: If offered anesthesia/sedation/pain medications before/during/after a gynecological procedure, would you accept?	
Response	**Percent frequency**
No	7.8%
May be	42.0%
Yes	47.8%
Q: Would you consider an IUD or Subdermal Hormonal Implant contraception options if pain was managed with anesthesia/sedation/medication?	
Response	**Percent Frequency**
No	42%
Yes	13.7%
I already have an IUD or implant	32.2%
Not interested in contraception	10%

Discussion

It has been established and supported in this study that many gynecological procedures, including LARC insertions and biopsies, can be severely painful for patients [7,15]. Despite this, the research, management, and discussion of pain control in gynecological offices have fallen behind most other specialties, which will be supported further. Whether that phenomenon is due to the gender gap in pain control or gender bias in pain treatment as part of the patient- provider encounter is hard to determine [16,17].

Although still lacking in clear guidelines and some studies indefinitive, there is research that pain control options for IUD insertions, implantable devices, and injections exist, including sedation, general and local anesthesia, topical numbing sprays, and oral medications to reduce cramping and soften the cervix [18]. Despite clear-cut protocols, most research suggests that pain control be multimodal and stresses the importance of patient counseling and emotional support. Despite the new and upcoming research showing that these pain control methods can be effective and that individual patient counseling is important, there are minimal and vague national guidelines, including in the United States, that outline and create specific recommendations for guiding clinicians on pain control [12].

The American College of Obstetricians and Gynecologists (ACOG) website contains a video and committee opinion article that discusses the pain experienced with an Intrauterine Device (IUD) insertion that goes over the analgesia methods listed above and their barriers to use with no clear guidelines for pain management. These barriers to analgesia use include wait-

ing for medication to take effect and contradicting research. ACOG reports that a complication for insertion is pain and concludes that there needs to be more research into effective options to reduce pain for IUD insertion. Still, no specific guidelines recommend that providers discuss the procedure's pain or how to manage it. ACOG does list a variety of analgesics for hysteroscopies, although the article states they are just as effective as a placebo. The Centers for Disease Control and Prevention (CDC) did release an updated Practice Recommendations for Contraceptive Use in 2024 that addressed common but complex issues for contraception based on review of scientific evidence and meeting with national experts and stated that "Lidocaine (paracervical block or topical) for IUD placement might be useful for reducing pain" and that Misoprostol might be useful in select patients [19].

Other high-resource countries seem to mimic similar ambiguity in pain management for these procedures; however, the guidelines explicitly suggest discussing with providers and implementing a waiting period for medication to take effect. The Royal College of Obstetricians and Gynaecologists (RCOG) released a Good Practice Paper for outpatient Hysteroscopy in pain management that clear language and discussions should be used before the procedure regarding pain control and type of anesthesia, and there should be a designated wait procedure for simple oral analgesics to take effect [20]. The United Kingdom Royal College of Obstetricians and Gynaecologists recommends specific pain management for outpatient hysteroscopic procedures, and the National Institute of Health and Care Excellence (NICE) also UK based stating more definitively that "analgesia options should be discussed and offered to all people having Intrauterine Contraception (IUC) inserted" [21]. The 2023 IUD Guidelines from the United Kingdom's Faculty of Sexual and Reproductive Health Care make several recommendations for pain management that follow research evidence [22].

The lack of pain management guidelines for gynecological procedures is not seen in similar procedures in other specialties. For example, a vasectomy, which is similar to an endometrial biopsy or other gynecological procedures where instruments are inserted into the body and incisions made or biopsies taken, can be both classified as an outpatient procedure. However, there is clear research on best practices of the vasectomy procedure analgesics and detailed guidelines for the pre-, intra-, and post-operative pain control of the procedure provided by the American Urological Association (AUA) [23,24].

Our study clarifies on a concerning issue stemming from the gender gap prevalent in both pain control and medical research that is being translated to a lack of pain management treatment and discussion. We underscore the insufficient clear research and guidelines pertaining to pain management in gynecological contraception and minor procedures. Alarmingly, patients are often not provided with transparent and comprehensive discussions regarding the potential pain associated with these procedures, nor are they adequately informed of their options for pain management. This could be due to time constraints for office discussions, length of procedure, or physicians not understanding pain experience or treatment during ambulatory procedures.

Consequently, many patients enter these situations uninformed about the potential discomfort they may experience and painful experiences, leading to a reluctance to undergo similar procedures in the future. Such an oversight is unacceptable, as it may deter women from seeking essential gynecological care, thereby jeopardizing their overall health outcomes, including the risk of unintended pregnancies, unmanaged menstrual issues, and untreated pathologies that could progress to more serious conditions such as cancer [13,14].

Conclusion

The lack of emphasis on pain management discussions in gynecological care is likely influenced by the absence of clear national guidelines, which can be attributed in part to gender bias in pain perception and a historical lack of research focus on pain control, perpetuated by a historically predominantly male-dominated medical approach. We advocate for developing guidelines to address poor pain management in gynecological procedures. Clinicians must prioritize discussions surrounding pain management in gynecological settings, ensuring patients are fully informed and empowered to make decisions about their care. Additionally, concerted efforts are required to connection the gender gap in pain research and advocate for the development of evidence-based guidelines customized specifically to pain management in gynecological procedures. Our study underscores the imperativeness of addressing these issues promptly, as evidenced by the significant proportion of survey respondents expressing hesitancy toward future utilization of Long-Acting Reversible Contraceptives (LARCs) and gynecological outpatient procedures. By advocating for improved pain management discussions and guidelines, we can mitigate barriers to care and promote better health outcomes for women.

Statement of Ethics

RVU IRB of Rocky Vista University College of Osteopathic Medicine reviewed and approved this study protocol, approval number [2023-085]. This study was

conducted with a commitment to maintaining the anonymity and confidentiality of all participants. Ethical guidelines were followed to ensure participants were informed about the study's purpose, their rights to decline participation at any time, and how their data would be used and protected.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

AF conceived the study idea, contributed to its design and execution, and was the first author. BE contributed to the introduction and discussion, participated in survey design/distribution, and contributed additional support to the study's aim. JC was responsible for the methodology section and contributed to the study's distribution. AV conducted the data analysis and interpreted the results. EG contributed to the introduction section, provided editorial assistance, and contributed to other aspects of the study.

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Availability Statement

All data generated or analyzed during this study are included in this article. Further inquiries can be directed to the corresponding author.

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