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HPV self-collection for cervical cancer screening among survivors of sexual trauma: a qualitative study

Rachel A. Madding^{1*} , Jessica J. Currier², Keenan Yanit¹, Madeline Hedges³ and Amanda Bruegl¹

Abstract

Intimate partner violence affects 20–30% of women in the United States. Disparities in routine cervical cancer surveillance have been demonstrated in certain populations, including victims of intimate partner violence (IPV). This study examined and assessed the acceptability of high-risk HPV (hrHPV) self-collection among individuals who have experienced IPV. We conducted an observational study using qualitative data collection and analysis. We interviewed individuals with a history of IPV and who currently reside in Oregon. This study identified key themes describing knowledge and attitudes towards cervical cancer screening for individuals who have experienced IPV. They include: guideline knowledge, prior office-based cervical cancer screening experience, barriers to cervical cancer screening, at-home hrHPV self-collection experience, and testing confidence. Participants experienced fewer barriers and expressed increased comfort and control with hrHPV self-collection process. Individuals with a history of IPV have lower rates of cervical cancer screening adherence and higher rates of cervical dysplasia and cancer than other populations. The patient-centered approach of hrHPV self-collection for cervical cancer screening can reduce barriers related to the pelvic exam and empower patients to reduce their risks of developing cervical cancer by enabling greater control of the testing process.

Keywords Human papillomavirus (HPV), HPV self-collection, Cervical cancer screening, Intimate partner violence, Sexual trauma, Health knowledge

Introduction

Cervical cancer is the fourth most common cancer in females worldwide and is preventable through cervical cancer screening programs [1]. In 2021, 72.4% of all eligible individuals in the United States were up-to-date on their cervical cancer screening [2]. The Centers for

Disease Control and Prevention Healthy People 2030 aims to increase the proportion of women ages 21 to 65 participating in cervical cancer screening to 84.3% [3]. Most cervical cancer cases occur in never screened or under-screened individuals such as undocumented citizens, under-represented minorities, the underinsured, and victims of intimate partner violence (IPV) [4–6].

IPV affects 20–30% of women in the United States and has been associated with lower rates of cervical cancer screening and increased risk of cervical cancer (adjusted relative risk [aRR]=4.28; 95% CI 1.94, 18.39) [7]. Women who have experienced IPV encounter a higher number of negative social determinants of health. These factors have been linked to cervical cancer and include lacking

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health insurance coverage, living in poverty, having limited education, facing challenges in finding employment, and having reduced access to transportation [8]. An individual who has encountered IPV or whose past has led to feelings of embarrassment around pelvic exams might forego screening or experience notable distress during an examination, potentially being retraumatized by the experience [5, 9].

High-risk human papillomavirus (hrHPV) self-collection can reduce barriers and increase uptake of cervical cancer screening among under-screened women [6, 10, 11]. According to the National Cancer Institute there are 12 high-risk HPV types that have been associated with cancer including cervical cancer [12]. HrHPV self-collection uses a simple collection device (e.g., a brush or swab) to obtain cervicovaginal cells to test for hrHPV infection. HrHPV self-collection testing has comparable sensitivity and specificity to clinician-collected samples for the detection of high-grade cervical precancerous lesions [13, 14]. Self-collection eliminates the need for an office visit and pelvic exam. If hrHPV is detected, individuals can proceed to clinic-based follow-up care. Research has already shown that in under-screened individuals from low-income backgrounds, the distribution of mailed self-collection kits for hrHPV resulted in greater uptake of cervical cancer screening [15, 16]. There are no published studies on the role for hrHPV self-collection among individuals with a history of IPV. This study explores perspectives on clinic-based cervical cancer screening and attitudes towards self-collection for hrHPV among individuals who have experienced IPV.

Methods

We conducted an observational study using qualitative data collection and analysis. We interviewed individuals who had a history of IPV residing in Oregon. Our study was approved by the Oregon Health and Science University (OHSU) Institutional Review Board. All participants provided written informed consent prior to enrollment in the study. In addition, all enrolled participants provided informed verbal consent prior to beginning the interviews. The research team included four members consisting of two OB/GYN physicians, one Gynecologic Oncology physician, one premedical student, and one Ph.D. health services researcher.

Participants

Participants were recruited via healthcare provider networks, the OHSU Women's Health Research Unit (WHRU) Newsletter and from prior participants in WHRU studies. To be eligible, participants met the following criteria: (1) individuals with a cervix who are eligible for primary hrHPV testing (age 25 and older) according to national cervical cancer screening guidelines

[17]; (2) self-identify as having a history of IPV, sexual abuse, or sexual trauma; (3) have access to a smartphone, tablet, or computer with video capability; (4) English speaking; and (5) reside in the state of Oregon. All participants were mailed a hrHPV self-collection kit after completing the intake survey and the electronic consent in the Research Electronic Data Capture (REDCap) secure web application [18]. Results were available one week after completion of the self-collection kit. No participants had prior experience with hrHPV self-collection. Participants and the research team met for the first time during the interview. All participants were compensated for their time via a ClinCard debit card. Participants were given \$10 for completing the consent and demographic survey, \$40 for completing the hrHPV self-collection and \$50 for participating in an interview.

Data Collection

Data were collected through interviews with participants and a survey (Appendix A). Once recruited and consented, participants completed a brief demographic survey via REDCap [18] and were subsequently scheduled for an interview. Interviews were conducted between October 2022 and May 2023. An OB/Gyn physician (RM) and Ph.D. health services researcher (JC) with expertise in qualitative research conducted all interviews virtually using a semi-structured interview guide (Appendix B). No repeat interviews were conducted. Interviews were performed virtually through Webex, a secure, encrypted virtual platform. All interviews were audio and video recorded. No one other than two members of the research team and the participant was present during an interview.

The interview guide, consisting of nine questions, was developed using the socio-ecological model to explore the interaction of individual, social, organization, and community level factors affecting cervical cancer screening among study participants [19]. Individual level factors included knowledge, attitude, and perceived value of cervical cancer screening and hrHPV self-collection. Social level factors included social support provided by family, partners, or friends. Organizational level factors explored the patient-provider relationship, including provider knowledge and sensitivity providing cervical cancer screening to individuals who have experienced sexual trauma and perceptions and the exam environment, specifically preferences for cervical cancer screening at a clinic versus an individual's home. Community level factors probed access to cervical cancer screening including clinic location, workplace flexibility, insurance status, and transportation. Policy level factors were not explored. Two questions addressed general cervical cancer screening knowledge (individual level factors); two questions addressed prior experience with office-based

cervical cancer screening (organizational level factors); and the remaining five questions were open-ended focusing on the hrHPV self-collection experience and preferred cervical cancer screening method (individual, social support, organizational, and community level factors). Interviews lasted an average of 32 min. Each interview was transcribed verbatim, de-identified, and verified for accuracy prior to analysis by a team member. We did perform member checking with participants, which is a process used in qualitative research to ensure the validity of the results.

Qualitative analysis

Taguette (version 1.41) [20], a qualitative software program, was used to organize qualitative data. We drew upon grounded theory, conducting and analyzing interviews until we reached thematic saturation, defined as the point at which no new themes repeat/reoccur [21]. A comparative, iterative, and interactive method, grounded theory follows a cyclical research process of collecting, analyzing, and coding data, memo-writing and theoretical sampling to the point of saturation, where no new ideas, theories or constructs emerge [22]. Application of grounded theory ensured the research team was open to all possible theoretical understandings, developed interpretations through the process of simultaneous data

collection, coding and categorizing the data, and had a system to develop, check and refine theoretical categories [23–27]. First, two team members (JC and RM) coded the transcripts together. Our multidisciplinary team created a codebook using an inductive approach. Next, the study team discussed and refined the codebook, recoding, and adding new codes as needed. Emergent themes were derived from the data. The two researchers discussed variations in interpretation and application of codes until agreement was reached. We categorized themes by micro, macro, and meta-level themes. Using this organizational structure, we presented our results in a thematic analysis memo.

Results

Sixteen interviews were conducted between October 24th, 2022 and May 30th, 2023. No enrolled participants withdrew from the study and all completed the demographic survey (Table 1). The median age was 34.5. Fifteen of the sixteen participants (94%) identified as female and one identified as non-binary. 81% identified as white, 43% identified as single, and 43% as married or living with a partner. All participants successfully collected a vaginal specimen sufficient to test for the presence or absence of high-risk HPV. 3/16 participants had the presence of high-risk HPV.

We identified five macro level themes that included: screening guideline knowledge, prior office-based cervical cancer screening experience, barriers to screening, hrHPV self-collection experience, and testing confidence. (See Fig. 1) Themes and exemplar quotations from participants are highlighted in Table 2.

Table 1 Demographic information of respondents ($n = 16$)

Characteristic	<i>N</i> (%)
Age	
(21–30)	4
(30–40)	9
(40–50) *Eldest participant was 50 years old	3
Race/ethnicity (all that apply)	
Black or African	1
White	13
American Indian/Alaska Native	1
Asian	2
Native Hawaiian or Pacific Islander	0
Other	
Hispanic or Latinx	2
Gender	
Female	15
Male	
Transgender	
Non-binary/non-conforming	1
Other	
Relationship Status	
Married or living with a partner	7
Widowed	
Divorced	2
Separated	
Single	7
Do not wish to answer	

Theme 1: screening guideline knowledge and HPV awareness

Theme 1 pertains to the participants' comprehension of cervical cancer screening guidelines. Participants were globally confused about screening guidelines: age to begin screening, frequency of screening, and who needs screening. Several participants lacked knowledge about hrHPV, particularly confusion about sexual activity and its associated risk for HPV.

Theme 2: prior cervical cancer screening experience: discomfort, pain, fear, and the importance of communication

Theme 2 focused on prior experiences with cervical cancer screening. Respondents described experiences that created a positive exam environment and also examples of feeling pain, fear, and discomfort. Theme 2 highlights the influence of physical pain (secondary to instruments used in the exam, as well as difficulties with entering the vagina) and emotional pain (feelings of being minimized or dismissed by their provider). Fear was associated with



Fig. 1 hrHPV Self Collection Themes

the exam and receiving an abnormal result. Discomfort stemmed from vulnerability associated with the exam, including the nature of the physical exam, the pace of the exam, and the number of people in the exam room.

Participants emphasized the importance of a provider's communication and word choice during the visit. Participants remarked about feeling vulnerable and their perceived lack of control. Embedded in theme 2 is the patient-provider relationship which can be damaged or strengthened through a provider's communication style and bedside manner. For example, one participant stated, "She was, like, explaining to me what she was doing and checking in to see how I was feeling, if things cause pain, and let me know when it was going to be inserted and so it was just a lot more helpful to be taken really slowly and I felt like I could trust her a lot more because she was being very transparent about every single thing in an area of my body that's very hard for me to let other people around and so I felt like that just helped build my trust." We found that participants who felt that their providers practiced trauma-informed care, had providers who created a safe space that made participants feel more comfortable and included explaining and slowing the pace of the exam. Conducting trauma-informed exams involves

prioritizing patients' feelings of safety, control, and choice [28]. Several participants commented on the value of providers acknowledging the abuse and the difficulties that cervical cancer screening poses as important factors for improving the experience.

Theme 3: barriers to clinic-based cervical cancer screening

Theme 3 revealed individual and health system level barriers to clinic-based cervical cancer screening. Individual level barriers focused mainly on discomfort, fear, poor communication from a prior provider, a history of IPV, insurance status, transportation, and clinic location as reasons for delaying or forgoing screening. One participant shared, "There's also a fear of people walking through the door. There's a lot of fears in that, but also being in the hands of somebody else is very similar to being in the hands of somebody else who you didn't consent to." Another participant said, "It's very uncomfortable so that, for me it is definitely enough to cause a hesitation and try to put it out as far as I can or procrastinate." Health system barriers, including being uninsured and not having a primary care provider, were identified by multiple participants as significant obstacles.

Table 2 Themes and exemplar quotations from respondents

Theme	Exemplar Quotation
Screening	"I didn't understand a whole lot about it." (Respondent 2)
Guideline Knowledge	"So, for me, it really just comes down to, they said I have to test. I'm going to test, but I don't know why." (Respondent 1)
Prior office-based cervical cancer screening experience	"Nothing. I knew nothing." (Respondent 11) "She was, like, explaining to me what she was doing and checking in to see how I was feeling, if things cause pain, and let me know when it was going to be inserted and so it was just a lot more helpful to be taken really slowly and I felt like I could trust her a lot more because she was being very transparent about every single thing in an area of my body that's very hard for me to let other people around and so I felt like that just helped build my trust." (Respondent 7) "And then it sometimes feels very abrupt and then rushed and distancing when the provider finishes and it's like, here's a pad, here's a washcloth. Phrases like 'clean yourself up' are just not good. Take a moment to take however long you need to take care of yourself feels so much better than, clean yourself up. Using more specific language, like relaxing is really abstract, using more specific language can really help. I noticed you're breathing really deeply, keep that up. That felt encouraging. It felt affirming." (Respondent 4) "In these cases, I have known them (provider), but they're still a stranger to me. I don't hang out with them. I'm not intimate with them. I don't have sex with them. Yeah, I don't engage in intimate activities with this person who's into my intimate body parts. It is awkward because we wouldn't do that with any other stranger." (Respondent 1)
Barriers to screening	"There's also a fear of people walking through the door. There's a lot of fears in that, but also being in the hands of somebody else is very similar to being in the hands of somebody else who you didn't consent to." (Respondent 1) "I didn't have insurance. I didn't have a provider, so there were probably many years, especially in my young adulthood, where I didn't have access to that, or at least know how to access that." (Respondent 4) "The ability to take off work and to get to a clinic honestly been the biggest thing - lack of time off and no clinics near me. It's not like I can run and get it done on a lunch break. I have to also factor in it's about an hour each way on public transit." (Respondent 10)
At-home hrHPV self-collection experience	"It's nice that I don't have to interact with another person and tell them why it's a hard experience for me. It's just a routine procedure and I get that, but, for me, it's not." (Respondent 7) "You don't have to go somewhere. You don't have to deal with another person. It's less invasive in my opinion. It was simple and easy to do." (Respondent 2) "I didn't have to worry about catching a bus to go down there and make an appointment and being late and everything else. It is a lot more flexible; I can just do it on my own without anybody else around." (Respondent 2)
Testing Confidence	"I always wonder is it going to give me like a real result? Can it really know if I'm doing this right?" (Respondent 5) "Just doing self-collection kits in general, did I do it right? Did I get enough of whatever they needed on this thing for them to be able to test it accurately? I guess that's the only kind of concern that I have." (Respondent 7) "After the self-collection process, I'm still left with this sense of can I trust these results?" (Respondent 4) "The only thing that would bother me is if there was any slight delay of between getting that result and talking to a doctor." (Respondent 14)

Theme 4: at-home hrHPV self collection experience: convenience, control, and comfort

Theme 4 is about a person with a history of IPV's experience juxtaposed with the hrHPV self-collection process. Topics embedded within theme 4 are control, flexibility, convenience, ease-of-use, and personal safety. Participants in our study expressed a strong preference for at-home hrHPV self-collection as a method for cervical cancer screening, with 87.5% of participants preferring self-collection over provider-collected screening. Having complete control of the testing process was identified as the single most important benefit of hrHPV self-collection. One participant stated, "You don't have to go somewhere. You don't have to deal with another person. It's less invasive in my opinion. It was simple and easy to do." Participants also noted convenience, ease of use, privacy, and lack of discomfort during the self-collection process as reasons they preferred it. Another participant said, "I didn't have to worry about catching a bus to go down there and make an appointment and being late and everything else. It is a lot more flexible; I can just do it on my own without anybody else around." Notably,

mentioned barriers to screening were alleviated with hrHPV self-collection including pain, mistrust, lack of control, and privacy.

Theme 5: testing confidence: belief in self-collection as a valid screening method

Theme 5 addressed how participants felt about self-collection results. A common concern among participants was not collecting correctly, and that test results were inaccurate. Embedded within theme 5 is that some respondents desire the opportunity to connect with a provider as part of the self-collection experience. We identified uncertainty of follow-up for an abnormal test result as a concern. Accessibility and the timely availability of results were identified as positive aspects of self-collection.

Discussion

Five macro level themes describing knowledge and attitudes towards prior office-based and self-collection cervical cancer screening for individuals who have experienced IPV were identified. Results revealed suboptimal

knowledge about cervical cancer screening guidelines, individual and system level barriers to screening, and a strong preference among individuals with a history of IPV for hrHPV self-collection. Despite this preference, we identified a need for patient education and assurance around specimen collection and test result accuracy.

Knowledge about cervical cancer screening guidelines is a challenge to cervical cancer screening guideline adherence and is experienced by many populations [29, 30]. In one U.S. study, the primary reason for not being up-to-date was not knowing that screening was needed [31]. Previous studies also documented poor cervical cancer screening knowledge in sexual trauma survivors [32, 33]. In addition to screening-based knowledge, knowledge of hrHPV, a critical factor in the development of cervical dysplasia and cancer, was also suboptimal in our study population. Several studies have found that many women have low levels of HPV knowledge, including knowledge of risk factors, disease management, and cancer risks [34]. Changing guidelines may make it difficult for patients to stay up-to-date. In 2021, the national cervical cancer screening guidelines were updated and now recommend a Pap test every 3 years for average-risk women aged 21–65 [30]. Women aged 30–65 are advised to receive a Pap test alone every 3 years, a high-risk HPV test alone every 5 years, or co-testing (a high-risk HPV test and a Pap test) every 5 years [35]. Prior studies have demonstrated that implementing cervical cancer educational interventions can increase participation in screening programs [36, 37]. Regardless of screening modality, increasing knowledge regarding cervical cancer screening will help increase screening rates [37–39].

Office-based cervical cancer screening consists of a patient undressing, the lithotomy position (patient is supine with their legs separated, flexed, and supported in foot/leg rests), introduction of a speculum into the vagina to visualize the cervix, and a bimanual exam (one hand on lower abdomen and two fingers in the vagina to palpate the uterus and ovaries). A personal history of trauma or a traumatic prior pelvic exam can have a lasting negative effect on future cervical cancer screening and some respondents endorsed feelings of traumatization during office-based visits; conversely, positive office-based experiences can improve patient-provider relationships and reduce fear around future exams [40]. Prior trauma can affect an individual's stress response, sense of safety, perception of control and has been associated with pelvic exam avoidance [41]. Theme 2, prior cervical cancer screening experience: discomfort, pain, fear, and the importance of communication highlights the lack of a sense of safety and the desire for some amount of control. By taking a more trauma-informed approach, providers can create a safe space, explain each step of the exam, and give some sense of control back to the patient. A

trauma-informed approach to cervical cancer screening can address complex barriers for those with a history of IPV and others who avoid cervical cancer screening [40]. Trauma-informed approaches should be incorporated into medical training for all health care professionals. Trauma-informed care is grounded in an understanding and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety and creates opportunities for survivors to rebuild a sense of control and empowerment [42].

Our study identified several other barriers to cervical cancer screening in this population including financial costs, insurance status, transportation, time off work, and challenges with scheduling. Many of these barriers are not unique to the IPV population and have been found to be present across many different populations [5]. In a U.S. based study of uninsured women, the most common cited barriers included cost (62%), finding cancer (53%), anxiety about the procedure (39%), feelings of embarrassment (26%), anticipation of pain (23.6%), presence of a male physician (19%) and lack of knowledge (19%) [43]. In a Swedish study, the most cited reasons for nonattendance were feeling healthy, lack of time, and discomfort with the gynecologic examination [44]. A similar study in England found the most common barriers included embarrassment, intending to go but not getting around to it, fear of pain, and worry about what the test might find [45]. Delays in screening and timely diagnosis contribute to disparities in cervical cancer mortality. Among those in the U.S. diagnosed with cervical cancer, more than 50% have not been screened in over 5 years or had their abnormal results not managed as recommended by current guidelines, suggesting that operational and access issues contribute to cervical cancer [46].

To improve the experience and address some of these barriers several solutions have been proposed in the literature. Some suggestions have focused on communication, safety, trust, having a chaperone present, and sharing control. Another solution that may help to address logistical and psychosocial barriers for underscreened groups is HPV self-collection kits for at-home or in-clinic use [47].

HrHPV self-collection can reduce barriers to cervical cancer screening among individuals with a history of IPV by providing patient autonomy and aligning with trauma-informed gynecologic care. Additional studies across multiple patient groups have demonstrated self-collection is acceptable and preferred compared to provider-collected tests [48–50]. One cross-sectional study of 605 women in the United States used an online survey to examine the acceptability of HPV self-collection as a screening method [51]. This study by Bishop et al. found that 72.7% of U.S. women reported high willingness to

use an hrHPV self-sample kit [51] which is comparable to other studies from the US and abroad [52–55].

Despite a preference for self-collection, participants expressed doubts regarding testing confidence, consistent with previously published research [48, 50, 56]. Numerous studies have documented patient and provider concerns regarding specimen collection confidence, tracking the results, delivering results to their provider, and a desire to discuss the test results in clinic [35, 57–59]. Fitch and colleagues performed a randomized study, stratified by menopausal status, of telehealth instruction vs. standard written instructions and found that the addition of provider telehealth instruction did not increase patient comfort with performing self-collection [60].

Table 3 Recommendations to improve cervical Cancer screening using self-collection in the IPV Population

Recommendation	Issue/Concern	Specific Recommendations
Recommendation 1	Knowledge about cervical cancer screening is lacking	Increased knowledge and awareness leads to increased compliance with guideline adherent care. To increase knowledge: Ensure healthcare providers and public health staff are familiar with the latest cervical cancer screening and management guidelines. Update brochures and educational materials to have latest patient information and use a variety of platforms for distributions (e.g. hard copy, social media, after-visit summary materials).
Recommendation 2	Pain, fear, discomfort associated with gynecologic exam	Trauma-informed care should be central to any patient interaction with additional education for a trauma-informed pelvic exam.
Recommendation 3	Patient concerns regarding self-sampling correctly	Educate patient that many studies have demonstrated the feasibility of hrHPV self-collection. Review instructions with patient if they need additional assurance in obtaining a sample.
Recommendation 4	Patient concerns about accurate results with self-sampling	Educate patient that studies have shown similar results for detecting moderate dysplasia or worse when comparing self-sampling to provider-collected samples. Companies with direct-to-consumer sales of testing kits should clearly provide their sensitivity and specificity for detecting moderate dysplasia or greater.

Bishop et al. found similar concerns about test accuracy (53.1%), obtaining the sample incorrectly (51.1%), and a preference to see a health care provider for cervical cancer screening (25.3%) [51]. The National Cancer Institute is conducting a large trial comparing self-collection to provider-collected cervical cancer screening. FDA approval for self-collection is anticipated pending the final results. We must address these concerns to implement self-collection into existing cervical cancer screening programs and increase the numbers of individuals actively participating in screening programs.

This study has several strengths. This is the first study to explore the hrHPV self-collection experience in sexual trauma survivors and we performed sufficient interviews to reach thematic saturation. Limitations include the participant population consisting largely of non-Hispanic white and cis-gendered females. We asked respondents to reflect on events that happened in the past which may have led to recall bias. Expanding self-collection research into additional populations would add to this body of literature.

Recommendations

We identified several opportunities to increase and improve cervical cancer screening for the IPV population and included a table with four recommendations (Table 3). First, awareness about the eligibility, timing, and frequency of cervical cancer screening is suboptimal for this population. Other published studies demonstrate increased knowledge and awareness leads to increased compliance with guideline adherent care [36, 37]. Thus, provider education on the importance of recommending and explaining patient-specific cervical cancer screening guidelines is an essential first step. Additionally, patients receive health information from other sources such as social media, friends, and formal public service announcements through government agencies. A multi-modal education strategy with culturally tailored messaging would create a greater educational impact. This would be inclusive of anyone eligible for cervical cancer screening. For example, this could involve short message service (SMS) texts about the importance of early detection or messages to allay fear or a reminder of where to go for screening. Second, trauma-informed gynecologic care can reduce individual level screening barriers such as pain, fear, and discomfort. Any provider performing a gynecologic exam should proceed in a trauma-informed manner [61]. Third, to address concerns about self-collection correctly, providers and future programs should emphasize that most people who have performed the self-collection test reported it was easy to use and were able to appropriately obtain an adequate sample [48, 50, 54, 55]. Fourth, to address concerns about the accuracy of self-collection, the company who sends out the

kits could include information about the sensitivity and specificity of the test for detecting moderate dysplasia or greater. Lastly, because the hrHPV self-collection test was recently FDA approved on May 15th, 2024 it will be imperative that providers who offer self-collection tests also share this information with patients [62].

Conclusion

Cervical cancer screening saves lives through early detection of cancer. Primary care providers (PCPs), Obstetrician/Gynecologist (OB/GYNs), and other advance practice providers are essential to ensuring adequate screening and preventing cervical cancer. This study provides important information for health care providers about the importance of alternative screening methods and use of hrHPV self-collection for this patient population. Individuals who have experienced IPV have lower rates of guideline adherent cervical cancer screening and increased risk of cervical cancer. Fear, pain, and discomfort experienced during prior clinic-based pelvic exams can also have an adverse impact on individual's adherence to screening. HrHPV self-collection testing reduces screening barriers, while providing increased comfort and control for those who have IPV and sexual trauma. Results from this study can help guide widespread implementation of hrHPV self-collection for this population.

Abbreviations

HPV	Human papillomavirus
hrHPV	High risk human papillomavirus
IPV	Intimate partner violence
OHSU	Oregon Health and Science University
REDCap	Research Electronic Data Capture

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12905-024-03301-x>.

Supplementary Material 1

Supplementary Material 2

Supplementary Material 3

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Author contributions

R.M. contributed to conceptualization, investigation, methodology, project administration, data curation, formal analysis, visualization, writing—original draft, and writing—review and editing. J.C. was involved in conceptualization, investigation, methodology, supervision, data curation, formal analysis, visualization, writing—review and editing. K.Y. carried out supervision, visualization, and writing—review and editing. M.H. carried out visualization. A.B. was involved in conceptualization, methodology, investigation, supervision, visualization, project administration, writing—original draft and writing—review and editing and funding acquisition. All authors approved the final draft of the article for submission.

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Data availability

Data is provided within the manuscript or supplementary information files. The dataset used and analyzed during the study are available from the corresponding author on reasonable request. This would include transcripts of all the interviews conducted. Please contact Rachel Madding, madding@ohsu.edu to request materials.

Declarations

Ethics approval and consent to participate

Our study was approved by the Oregon Health & Science University Institutional Review Board (approval no. 24429). All participants provided written informed consent prior to enrollment in the study. In addition, they all provided informed verbal consent prior to beginning the interviews.

Consent for publication

Not Applicable.

Competing interests

The authors declare no competing interests.

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