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Review

## Intimate partner violence in women with cancer: An integrative review

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A R T I C L E I N F O	A B S T R A C T				
Keywords: Intimate partner violence Women Cancer Related factors	Objective: This study aims to estimate the incidence of intimate partner violence (IPV) among women cancer survivors and identify associated factors.   Methods: Using Whittemore and Knafl's integrative review method, we synthesized literature on the association between IPV and cancer in women.   Results: We conducted a comprehensive search of literature published between 2003 and 2024 across eight databases, resulting in 24 English-language articles. These articles included qualitative, quantitative, and mixed-method studies. Our synthesis identified several factors influencing the relationship between IPV and cancer, including sociodemographic factors (e.g., age and income), health-related factors, lifestyle-related factors (such as life experiences and interpersonal relationships), cancer-related factors (including type and treatment), and cancer screening behaviors.   Conclusions: The study highlights that various factors contribute to the prevalence of IPV among women with cancer. Particularly vulnerable are younger patients, those with lower incomes, and those with more severe disease manifestations. Healthcare professionals should assess for IPV risk during medical consultations and ensure access to appropriate support services.				

#### Introduction

The increasing prevalence of intimate partner violence (IPV) poses a significant global health risk. According to a worldwide survey across 79 countries, over 30% of women have experienced physical or sexual violence by their partners.<sup>1</sup> The Centers for Disease Control and Prevention defines IPV as sexual violence, physical violence, psychological aggression, and stalking by current or former intimate partners.<sup>2</sup> While both men and women are vulnerable to IPV, women are disproportionately affected.<sup>1</sup> It has been documented that women who endure IPV often neglect their own health.<sup>3,4</sup> For instance, women subjected to sexual abuse participate less frequently in cervical screenings; less than 50% have undergone routine screenings in the past five years, compared to 78.6% participation reported by the National Health Service Cervical Screening Program in the U.K.<sup>5,6</sup> The trauma from sexual violence may deter them from undergoing cancer screenings. Moreover, IPV victims are more likely to engage in harmful behaviors such as risky sexual activities, excessive drinking, and smoking, which can delay their access to cancer treatment and care.7

The presence of chronic disease in one partner can precipitate IPV. In cases of cancer, this may lead to stress, role conflicts within relationships, and increased IPV susceptibility.<sup>2</sup> Women with cancer experience IPV at double the rate of women without cancer and face heightened risks due to social isolation and the increased need for support from intimate partners.<sup>2,8</sup> Such circumstances complicate family dynamics and cancer treatment decisions. For women with a history of IPV, a cancer diagnosis can intensify or change the nature of the violence.<sup>7</sup> Aygin et al. (2019) found that these women might alter their communication methods or frequency with partners and struggle to maintain intimate relationships post-diagnosis.

The prevalence of IPV among women with cancer is notably high, although it varies by cancer type. Reports indicate that lifetime IPV experiences among women with cancer range from 5.8% to 54%.<sup>9–12</sup> In the past year alone, 90% of women with breast cancer reported IPV exposure, with 57% experiencing multiple forms of IPV.<sup>12</sup> IPV can inflict significant physical and psychological harm, affecting the patient's treatment adherence and outcomes. Research suggests that for women facing both cancer and IPV, these combined stressors can severely impact their health

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### Table 1

Parameters for article searching.

Search terms	"Intimate partner violence [MeSH Terms] OR IPV OR intimate partner abuse OR domestic violence OR violence OR abuse OR psychological harm OR sexual violence OR physical violence OR stalking" AND "cancer [MeSH Terms] OR cancer survivor OR tumor OR carcinoma OR neoplasm" AND "Women [MeSH Terms] OR female OR woman"
Databases	CINAHL, MEDLINE, PubMed, EMBASE, Web of Science, Scopus, EBSCO and PsycINFO
Years included	2003–2024

and treatment results. Qualitative studies reveal that women with concurrent IPV and cancer report increases in their partners' abusive behaviors during cancer treatment, which leads to treatment delays and worsens their quality of life.<sup>13</sup> Furthermore, women with histories of both IPV and cancer are more prone to sexual dysfunction.

There is a noted gap in literature reviews focusing on factors influencing IPV incidence among cancer survivors. Given the increasing recognition of IPV's detrimental effects on women with cancer, this study seeks to conduct an integrative review to estimate IPV's incidence among this demographic and to identify the associated factors.

#### Methods

#### Inclusion/exclusion criteria

An integrative literature search was conducted utilizing Whittemore and Knafl's method.<sup>14</sup> This review encompassed studies that provided insights on IPV among women with cancer. We identified research articles by searching key databases and examining reference lists systematically, following Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines outlined by Moher et al. (2009). The inclusion criteria were as follows: (1) studies involving women with cancer; (2) original research that analyzed IPV perpetrated by former or current partners against these women; (3) studies published in English between 2003 and 2024; (4) articles published in peer-reviewed journals. Exclusion criteria targeted studies focusing on other types of violence, such as war violence or forced marriages.

#### Literature search

Searches were executed across multiple databases, including CINAHL, MEDLINE, PubMed, EMBASE, Web of Science, Scopus, EBSCO, and

#### Table 2

MMAT rating of quantitative study.

PsycINFO. The search terms used were "intimate partner violence," "women," "cancer," and "cancer survivor," among others, in various combinations (Table 1). Following the selection of pertinent studies, the defined inclusion and exclusion criteria were applied. References from all included studies were further scrutinized for relevance.

#### Data evaluation, analysis, and reporting

Two authors independently screened the literature. Initially, titles and abstracts were reviewed to determine eligibility, with only those qualifying undergoing full-text review. Discrepancies among eligible studies were resolved through discussion until consensus was achieved. For evaluation purposes, the Mixed Methods Appraisal Tool (MMAT) version 2018,<sup>15</sup> was employed to assess methodological rigor. Each study included in this review was categorized within MMAT and assigned a rating of "don't know," "yes," or "no" for each criterion within its category (Tables 2 and 3).

Data from eligible papers were recorded on a standardized data abstraction form, which included details on the author, study design, patient age and region, cancer diagnosis, partner behavior, and key findings. A summarized presentation of the extracted data is provided in Table 4.

#### Results

The initial literature search yielded 6426 non-duplicate citations. The selection process is depicted in the PRISMA flow chart (Fig. 1). Following the inclusion and exclusion criteria, 24 full-text articles were selected for analysis.

#### Study characteristics

The review encompassed 24 studies, including 8 qualitative and 16 quantitative designs. The qualitative studies employed a phenomenological approach, whereas the quantitative studies varied, comprising 11 cross-sectional, one case–control, two retrospective, one prospective, and one longitudinal study. These studies were conducted across various countries: Australia (1), the United States (14), Brazil (2), Thailand (1), Iran (3), Kenya (1), China (1), and Jordan (1). A significant focus (95.83%) of these studies was on patients with cervical and breast cancer, with 62.50% originating from developed countries. Seventeen studies addressed IPV from physical, psychological, or sexual perspectives, while seven focused on one or two types, with sexual violence being the least reported.

Author (Year)	Methodological quality criteria						
	MMAT 1	MMAT 2	MMAT 3	MMAT 4	MMAT 5		
Coker et al. (2009)	+	+	+	+	+		
Loxton et al. (2009)	+	+	+	+	+		
Canady et al. (2010)	+	+	+	+	+		
Gandhi et al. (2010)	+	+	+	0	+		
Coker et al. (2012)	+	+	+	+	+		
Cesario et al. (2014)	+	+	+	0	+		
Levinson et al. (2016)	+	+	+	0	+		
Thananowan et al. (2016)	+	+	+	+	+		
Rafael et al. (2017)	+	+	+	+	+		
Coker et al. (2017)	+	+	+	+	+		
Dutta et al. (2018)	+	+	+	+	+		
Massetti et al. (2018)	+	+	+	+	+		
Jetelina et al. (2020)	+	+	+	+	+		
Fouladi et al. (2021)	+	+	+	+	+		
Meng et al. (2023)	+	+	+	+	+		
Urguhart et al. (2023)	+	+	+	+	+		

+ = 'Yes'; - = 'No'; 0 = 'can't tell'. MMAT 1: Is the sampling strategy relevant to address the research question? MMAT 2: Is the sample representative of the target population? MMAT 3: Are the measurements appropriate? MMAT 4: Is the risk of nonresponse bias low? MMAT 5: Is the statistical analysis appropriate to answer the research question? MMAT, Mixed Methods Appraisal Tool.

#### Table 3

#### MMAT rating of qualitative study.

Author (Year)	Methodological quality criteria						
	MMAT 1	MMAT 2	MMAT 3	MMAT 4	MMAT 5		
Sawin et al. (2009)	_	+	+	_	+		
Sawin et al. (2010)	-	+	+	0	+		
Sawin et al. (2011)	+	+	+	0	+		
Sawin et al. (2012)	+	+	0	+	+		
Speakman et al. (2015)	+	+	+	+	+		
Bagwell-Gray et al. (2022)	+	+	+	+	+		
Costa Leite et al. (2022)	+	+	+	+	+		
Sheikhnezhad et al. (2023)	+	+	+	+	+		

+ = 'Yes'; - = 'No'; 0 = 'can't tell'. MMAT 1: Is the qualitative approach appropriate to answer the research question? MMAT 2: Are the qualitative data collection methods adequate to address the research question? MMAT 3: Are the findings adequately derived from the data? MMAT 4: Is the interpretation of results sufficiently substantiated by data? MMAT 5: Is there coherence between qualitative data sources, collection, analysis, and interpretation? MMAT, Mixed Methods Appraisal Tool.

#### Table 4

IPV in the cancer context.

Author (Year)	Study design	Region	Study population	Cancer diagnosis	Partner behavior	Key findings
Sawin et al. (2009)	Phenomenology $(n = 7)$	United States	Cancer patient	Breast cancer	Psychological, physical, and sexual violence	Patients believed the pressure of IPV caused cancer or made it progress. Their health conditions gradually went worse with severe psychological traumatization.
Coker et al. (2009)	Cross-sectional study (n = 4732)	United States	General people (cancer patient included)	Cervical cancer	Physical, psychological, and sexual violence	The prevalence of IPV was 35.9%. Victims of IPV were more vulnerable to cervical cancer. There were several factors associated with IPV exposure: young age, low education, lack of private insurance, marriage, and a history of sexually transmitted infection.
Loxton et al. (2009)	Longitudinal study (n = 7312)	Australia	General people (cancer patient included)	Cervical cancer	Physical, psychological, and sexual violence	The prevalence of IPV was 13%. IPV negatively affected cervical cancer screening (papanicolaou smears). Patients who were exposed to IPV were more likely to have general practitioner visits with worse choices, to have chronic physical conditions and depression, to have difficulty managing their income, and less likely to live with their partners.
Canady et al. (2010)	Retrospective study $(n = 412)$	United States	General people (cancer patient included)	Breast cancer	Physical and psychological violence	Breast cancer survivors are prone to physical and psychological violence at 8%. IPV did not change significantly after diagnosis.
Gandhi et al. (2010)	Retrospective study ( <i>n</i> = 382)	United States	Cancer patient	Breast and cervical cancer	Physical, psychological, and sexual violence	The prevalence of IPV was 16.5%. Patients who received only emotional violence were more likely to be screened (mammograms and papanicolaou smears) than those who received sexual and/or physical violence.
Sawin et al. (2010)	Phenomenology $(n = 9)$	United States	Cancer patient	Breast cancer	Psychological violence	When intimate partners refuse to drive, patients are unable to access treatment due to the partners' lack of support.
Sawin et al. (2011)	Phenomenology $(n = 11)$	United States	Cancer patient	Breast cancer	Psychological violence	During the experience of breast cancer, patients perceived their partners as reinforcing violence, changing sexual relationships and intimacy, and controlling money to prevent treatment.
Coker et al. (2012)	Cross-sectional study ( $n = 533$ )	United States	Cancer patient	Breast, cervical, or colorectal cancer	Physical, psychological, and sexual violence	The prevalence of IPV was 37.1%. IPV negatively influenced cancer-related well-being indicators. Patients who experienced IPV were younger, less likely to be married, satisfied with their friendships, and more likely to be diagnosed with cervical cancer. They had lower monthly incomes, smoked, and experienced childhood sexual abuse.
Sawin et al. (2012)	Phenomenology $(n = 16)$	United States	Cancer patient	Breast cancer	Psychological violence	Patients made treatment decisions without their partners' support. They thought the older they got, the less they could fight IPV.
Cesario et al. (2014)	Prospective study $(n = 300)$	United States	General people (cancer patient included)	Cervical, thyroid, and skin cancer	Psychological and physical violence	Women who disclosed IPV were ten times more likely to develop cervical cancer than the general population. The severity and interference of pain were high in patients with IPV.
Speakman et al. (2015)	Phenomenology ( <i>n</i> = 21)	United States	Cancer patient	Breast, lymphoma and colon, skin, ovarian, uterine, and thyroid cancer	Physical, psychological, and sexual violence	An IPV diagnosis can lead to a continuation or an increase in IPV. Patients' partners couldn't understand poor physical stamina and the need for increased rest. They showed care when somebody else was around but became abusive when no one looked.

(continued on next page)

#### Table 4 (continued)

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Author (Year)	Study design	Region	Study population	Cancer diagnosis	Partner behavior	Key findings
Levinson et al. (2016)	Cross-sectional survey ( $n = 142$ )	United States	General people (cancer patient included)	Cervical cancer	Psychological, physical, and sexual violence	The prevalence of IPV was 37.1%. Patients have more access-related barriers to up-to-date cervical screening (papanicolaou smears) compared to IPV- related barriers. Specifically, they were unfamiliar with the examination and thought it cost too much time and money
Thananowan et al. (2016)	Cross-sectional study ( $n = 532$ )	Thailand	General people (cancer patient included)	Cervical cancer	Psychological, physical, and sexual violence	Psychosocial factors played a mediating role in the relationship between IPV and cervical cancer. IPV patients had higher rates of stress, depression, and cervical cancer, as well as lower levels of social support and self-esteem.
Rafael et al. (2017)	Case–control study ( <i>n</i> = 640)	Brazil	General people (cancer patient included)	Cervical cancer	Physical violence	The prevalence of IPV was 5.8%. Severe physical violence against the patients and the cooccurrence of the violence in the couple were risk factors for inadequate screening (papanicolaou smears). Patients with IPV exhibited a higher likelihood of binge drinking and had less education, on average, than non-IPV patients.
Coker et al. (2017)	Cross-sectional study (n = 3278)	United States	Cancer patient	Cancer	Physical, psychological, and sexual violence	A 37.3% prevalence of IPV was observed. In women with recent cancer diagnoses, IPV was linked to worsened mental and physical well- functioning. Patients with IPV were more likely to be depressed and stressed, have lower incomes, have two or more physical comorbidities, and be less likely to have private health insurance and to be currently married.
Dutta et al. (2018)	Cross-sectional study ( $n = 3222$ )	Kenya	General people (cancer patient included)	Cervical cancer	Physical, psychological, and sexual violence	In contrast to women who had not experienced IPV, victims of intimate partner abuse had a reduced likelihood of getting examined.
Massetti et al. (2018)	Cross-sectional study (n = 38,317)	United States	General people (cancer patient included)	Breast, cervical, and colorectal cancer	Physical, psychological, and sexual violence	The prevalence of IPV was 23.6%. Lower rates of mammography, fecal occult blood tests, and endoscopy tests were associated with IPV victimization. Patients with IPV had higher rates of drinking and smoking, fair or poor health, inconsistent social or emotional support, and low life satisfaction. They were also less likely to have frequent checkups, a personal physician or other healthcare providers or health insurance
Jetelina et al. (2020)	Cross-sectional study ( $n = 312$ )	United States	Cancer patient	Breast and cervical cancer	Physical, psychological, and sexual violence	The prevalence of IPV was 54%. Patients who were exposed to IPV were more likely to have aggressive breast cancer type, low socioeconomic status and were racial/ethnic minorities, and less likely to start their treatment with hormone therapy.
Fouladi et al. (2021)	Cross-sectional study ( $n = 211$ )	Iran	Cancer patient	Breast cancer	Psychological, physical, and sexual violence	Ninety percent of the patients said that they had encountered IPV in the year prior. Twelve points eight percent of the women reported being familiar with all types of violence. Women's empowerment can lessen the potential for violence against them.
Bagwell-Gray et al. (2022)	Phenomenology ( <i>n</i> = 30)	Iran	General people (cancer patient included)	Cervical cancer	Physical, psychological, and sexual violence	The results indicated a need for increased knowledge about cervical cancer as only 23% of the participants reported HPV vaccination. Patients' proactive cervical health behaviors can be understood according to the health belief model and feminist understandings of coercive control and empowerment.
Costa Leite et al. (2022)	Phenomenology $(n = 16)$	Brazil	Cancer patient	Breast cancer	Physical, psychological, and sexual violence	Half of the participants reported experiencing psychological violence, while 30% reported experiencing physical violence and 20% reported experiencing sexual violence.
Meng et al. (2023)	Cross-sectional $(n = 429)$	China	Cancer patient	Gynecological cancer	Physical, psychological, and sexual violence	Thirty-one percent of the patients surveyed disclosed a history of IPV in their past.
Urquhart et al. (2023)	Cross-sectional $(n = 6679)$	Jordan	General people (cancer patient included)	Cervical cancer	Physical, psychological, and sexual violence	Twelve-point six percent experienced physical violence, 16.2% experienced emotional violence, and 3.4% experienced sexual violence. Those who experienced emotional violence were more likely to be screened (papanicolaou smears).
Sheikhnezhad et al. (2023)	Phenomenology ( <i>n</i> = 9)	Iran	Cancer patient	Breast cancer	Psychological violence	Cognitive judgment shifting may manifest as various forms of blame among breast cancer patients experiencing IPV, encompassing subthemes of partner blaming patient, patient blaming partner, and self-blame.



Fig. 1. PRISMA flow diagram of literature search and selection process. PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021; 372:n71. doi: 10.1136/bmj.n71. For more information, visit: http://www.prisma-statement.

#### Sociodemographic factors

Several sociodemographic characteristics have been associated with IPV. Younger women, compared to older ones, were more likely to experience IPV during cancer survivorship.<sup>2,16</sup> Less educated women reported higher incidences of IPV than those with higher education levels.<sup>16</sup> An interaction between having less than eight years of education and the presence of severe physical violence was noted.<sup>17</sup> Contrarily, Coker et al.<sup>18</sup> found a high lifetime IPV rate among women with college degrees, diverging from other findings. Additionally, women with cancer who had experienced IPV were less likely to be married<sup>2,16,18</sup> and more likely to have private health insurance.<sup>16,18</sup>

The prevalence of IPV among women with breast and cervical cancer was notably high in low-income groups,<sup>2,12,18</sup> possibly due to increased economic pressures with partners.<sup>19</sup> A study highlighted that the living environment of cancer patients affected their treatment experiences.<sup>8</sup> Rural women faced more barriers compared to urban women, but rural settings also offered benefits such as geographic advantages, additional support, and positive healthcare relationships. Although the prevalence of IPV in women with breast and cervical cancer was higher among racial/ethnic minorities and those with low socioeconomic status,<sup>12</sup> another study found no significant correlation between IPV prevalence and the number of children, race, or ethnicity.<sup>18</sup>

#### Health-related factors

Victims who had experienced IPV reported significantly higher levels of pain severity and interference due to pain compared to those without IPV experiences.<sup>18,20</sup> IPV has been linked to higher-grade cervical lesions<sup>16,21</sup> and an increased likelihood of cervical cancer; women who disclosed IPV were found to be 10 times more likely to develop cervical cancer than the general population.<sup>22</sup> The potential mechanisms include indirect effects through psychosocial stress and maladaptive coping behaviors, as well as direct effects from sexual assault and the transmission of pathogens, given the higher rates of sexually transmitted infections among women experiencing IPV.<sup>16,21</sup> Additionally, women recently

diagnosed with cancer who reported current or past IPV exhibited poorer overall well-being. Patients with ongoing IPV often presented with multiple physical comorbidities.<sup>18</sup> Early identification of IPV and related stressors is critical to improving the well-being of women with cancer.

Women who had experienced IPV also reported higher levels of pain severity and greater interference from pain compared to non-victims.<sup>22</sup> Research indicates a mediating role of psychosocial factors in the relationship between IPV and cervical cancer.<sup>23</sup> Psychological symptoms such as stress, anxiety, sadness, and post-traumatic stress disorder were frequently reported among women with IPV.<sup>22–24</sup> Furthermore, studies have shown a positive correlation between stress, depressive symptoms, and the severity of IPV.<sup>23</sup>

#### Lifestyle-related factors

#### Life experience

Experiences of IPV have been associated with higher incidences of binge drinking and smoking.<sup>20</sup> IPV survivors with cancer were significantly more likely to have used illegal drugs and smoked cigarettes for extended periods compared to their non-IPV counterparts.<sup>16</sup> They were also less likely to cohabit with a partner.<sup>19</sup>

#### Interpersonal relationships

Women with cancer who had experienced IPV reported lower life satisfaction and inadequate social support.<sup>20</sup> They were often dissatisfied with their relationships with friends<sup>2</sup> and experienced isolation from family and friends due to prolonged abuse, which further deteriorated their interpersonal relationships.<sup>25</sup> During their cancer journey, particularly with breast cancer, these women reported increased control by their partners over intimate aspects of their lives, including sexual relationships.<sup>25</sup> Additionally, studies have found that social support and self-esteem are inversely correlated with the severity of IPV.<sup>23</sup>

#### Cancer-related factors

IPV has been identified among women with cancer, particularly in types predominantly affecting females, such as cervical and breast cancers. Women suffering from these cancers were found to be especially vulnerable to IPV, as the disease and its treatments can provoke sexual concerns within intimate relationships.<sup>26</sup> Additionally, IPV was linked to delayed cancer therapy and progression.<sup>27</sup> Women engulfed in the stress of IPV were more likely to make poor treatment decisions.<sup>27–29</sup> IPV behaviors from partners could directly interfere with cancer treatment or recovery plans, further exacerbating stress and negatively impacting cancer progression.<sup>27</sup> IPV has been observed to persist or even escalate following a cancer diagnosis. During early treatment stages, estrogen therapy was less frequently selected due to IPV influences.<sup>12</sup> Moreover, age and age-related issues influenced treatment decisions more significantly than partners' opinions, allowing most participants to independently make treatment choices despite unsupportive partners.<sup>23</sup> However, IPV did not appear to affect adherence to breast cancer survivorship recommendations.<sup>12</sup>

#### IPV and cancer screening

Inadequate cancer screening has been widely reported among women experiencing IPV.<sup>4,11,17,19,20,30</sup> Victims of IPV are more likely to receive insufficient pap tests, heightening their risk for cervical cancer due to increased likelihood of human papillomavirus infection and restricted access to healthcare services.<sup>18,19</sup> Interestingly, women who encountered IPV were as likely to undergo non-invasive procedures, such as cholesterol and blood pressure checks, as those who did not report IPV.<sup>7</sup> The reluctance among IPV victims to participate in cervical cancer screening may stem from perceptions of pelvic examinations as invasive and traumatic.<sup>18</sup> Moreover, compared to those who experienced physical or sexual violence, women reporting only psychological violence had higher rates of cervical and breast cancer screenings.<sup>11</sup>

#### Discussion

Though often considered a private matter and taboo to discuss, IPV was found to be prevalent in the range of 5.8%–54% among women with cancers such as cervical cancer. This prevalence is notably higher than that reported among men with cancer, which ranges from 2% to 15%.<sup>20</sup> This review illuminates the link between IPV and cancer, particularly in women with cervical and breast cancer. Screening programs for these cancers are crucial in reducing the incidence of advanced-stage cancers and mortality rates.<sup>31</sup>

The interaction between age and IPV influences cancer screening behaviors; middle-aged women experiencing IPV, particularly sexual or physical violence, are more likely to delay screening for cervical and breast cancer.<sup>11</sup> The studies included in this review also examine the coexistence of cancer screening and IPV. A significant portion of survivors of childhood sexual abuse were either under-screened or never screened for cervical, breast, and colon cancer.<sup>32-34</sup> This may be attributed to the invasive nature of these screenings, which can evoke memories of sexual abuse, leading to avoidance of such screenings and rejection of similar recommendations. Intriguingly, one study found a weak positive association between IPV in adulthood and breast cancer, but no link with a history of childhood abuse.<sup>7</sup> This area requires further investigation. Additionally, women disclosing severe intimate partner physical violence were twice as likely to have inadequate screening compared to those with adequate screening,<sup>17</sup> highlighting the need for increased awareness and timely screening in this high-risk group. The focus on 'cancer screening' presents a compelling avenue for future research in IPV among cancer patients.

The results identified several sociodemographic characteristics, health statuses, and life experiences related to IPV. It is commonly believed that the impact of physical violence on women's health and wellbeing generally decreases with age, whereas psychological violence may persist longer.<sup>35</sup> Evidence indicates that inadequate education is a risk factor for IPV; women disclosing IPV typically had lower educational levels compared to those who did not disclose IPV.<sup>16,17</sup> Interestingly, while a low level of education was a risk factor, a high level of education did not appear to be protective.<sup>18</sup> In studies including both male and female cancer patients, variables such as having young children, socioeconomic background, and age did not significantly influence IPV prevalence,<sup>36</sup> suggesting that age or gender differences may affect these outcomes. Further research is needed to understand the relationship between educational attainment and IPV. In terms of social characteristics, women experiencing IPV often have a lower social profile and are less likely to have health insurance coverage compared to those without IPV.<sup>37</sup>

The interaction between health-related factors and IPV has been identified. Women with a history of IPV commonly present with a high prevalence of comorbid illnesses. Changes in health status, including alterations in sexuality and body image, as well as chronic conditions, may exacerbate IPV.<sup>26</sup> A cancer diagnosis marks a critical juncture for patients and their families, potentially leading to familial conflicts and IPV, which in turn can result in social, economic, and emotional repercussions.<sup>26</sup> Cancer exacerbates these impacts, intensifying health issues and the financial burden of cancer therapy.<sup>38</sup> Post-treatment, women with cervical and breast cancer often report diminished sexual function or sexual dysfunction due to changes in femininity and body image.<sup>26</sup> These patients face challenges managing familial issues during treatment due to diminished energy and time, which may pave the way for IPV and impede access to cancer-related care.<sup>13,39-41</sup> Although IPV may continue or escalate following a cancer diagnosis, it has been observed that breast cancer survivors generally experience low levels of physical and psychological violence, and that IPV is not significantly altered by a breast cancer diagnosis.<sup>42</sup> Mejri et al. found a significant correlation between IPV prevalence and disease stage and cancer therapy, with patients at advanced stages or undergoing ongoing therapy more likely to experience IPV.<sup>36</sup>

Gender beliefs have traditionally been thought to mediate the effects of gender disparities on IPV perpetration.<sup>43</sup> However, current studies in cancer patients do not specify these effects. Notably, 48.3% of transgender individuals reported experiencing IPV in the past.<sup>44</sup> Additionally, difficulties were noted in recognizing details of IPV in narratives where the perpetrator was a woman or the violence occurred in a homosexual relationship.<sup>45</sup> This underscores the need to consider gender factors in IPV research. Future investigations could explore varied perspectives, such as IPV among male cancer patients, IPV in homosexual cancer patients, and other contexts.

#### limitations

Our study was subject to certain limitations. Firstly, our integrative review is confined to articles published in the English language, thereby limiting our insight into the cultural variations of IPV. Secondly, because of the limited number of included studies, we only examined female cancer patients as IPV victims, neglecting their role as perpetrators. Consequently, the scope of the research perspective lacks sufficient comprehensiveness.

#### Conclusions

Female cancer patients experience IPV to varying degrees, and this issue requires attention. The research underscores that several factors contribute to IPV, with younger patients, those with lower incomes, and those with more severe diseases presenting greater concerns. The wellbeing of female cancer patients is significantly affected by the dynamics of their intimate relationships. Therefore, it is recommended that healthcare professionals conduct assessments for IPV risk during medical appointments and ensure the provision of appropriate support services.

#### Ethics statement

Not required.

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#### CRediT authorship contribution statement

Feixia Ni: Conceptualization, Methodology, Data curation, Formal analysis, Funding acquisition, Writing. Tingting Zhou: Methodology, Writing – original draft preparation. Lili Wang: Methodology. Tingting Cai: Conceptualization, Methodology, Funding acquisition, Writing – review & editing. All authors had full access to all the data in the study, and the corresponding author had final responsibility for the decision to submit for publication. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

#### Declaration of competing interest

The authors declare no conflict of interest. The corresponding author, Dr. Tingting Cai, is an editorial board member of *Asia-Pacific Journal of Oncology Nursing*. The article was subject to the journal's standard procedures, with peer review handled independently of Dr. Cai and their research groups.

#### Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article.

## Declaration of generative AI and AI-assisted technologies in the writing process

No AI tools/services were used during the preparation of this work.

#### References

- Wang Y, Fu Y, Ghazi P, et al. Prevalence of intimate partner violence against infertile women in low-income and middle-income countries: a systematic review and metaanalysis. *Lancet Glob Health*. 2022;10(6):e820–e830. https://doi.10.1016/s2214-109x(22)00098-5.
- Coker AL, Follingstad D, Garcia LS, Williams CM, Crawford TN, Bush HM. Association of intimate partner violence and childhood sexual abuse with cancerrelated well-being in women. J Womens Health (Larchmt). 2012;21(11):1180–1188. https://doi:10.1089/jwh.2012.3708.
- Meng Y, Shang M, Cai T, et al. Incidence and risk factors of intimate partner violence among patients with gynaecological cancer in China. *Nurs Open.* 2023;10(8): 5338–5347. https://doi:10.1002/nop2.1771.
- Urquhart G, Maclennan SJ, Guntupalli AM. Is there an association between intimate partner violence and the prevalence of cervical cancer screening in Jordan? *PLoS One*. 2023;18(8):e0290678. https://doi:10.1371/journal.pone.0290678.
- Gesink D, Nattel L. A qualitative cancer screening study with childhood sexual abuse survivors: experiences, perspectives and compassionate care. *BMJ Open.* 2015;5(8): e007628. https://doi:10.1136/bmjopen-2015-007628.
- Aygin D, Bozdemir H. Exposure to violence in breast cancer patients: systematic review. Breast Cancer. 2019;26(1):29–38. https://doi:10.1007/s12282-018-0900-6.
- Cadman L, Waller J, Ashdown-Barr L, Szarewski A. Barriers to cervical screening in women who have experienced sexual abuse: an exploratory study. *J Fam Plann Reprod Health Care*. 2012;38(4):214–220. https://doi:10.1136/jfprhc-2012-100378.
- Johnson WA, Pieters HC. Intimate partner violence among women diagnosed with cancer. Cancer Nurs. 2016;39(2):87–96. https://doi:10.1097/ncc.00000000000265.
- Coker AL, Follingstad DR, Garcia LS, Bush HM. Intimate partner violence and women's cancer quality of life. *Cancer Causes Control.* 2017;28(1):23–39. https:// doi:10.1007/s10552-016-0833-3.
- Fouladi N, Feizi I, Pourfarzi F, et al. Factors affecting behaviors of women with breast cancer facing intimate partner violence based on PRECEDE-PROCEED model. J Caring Sci. 2021;10(2):89–95. https://doi:10.34172/jcs.2021.017.

- Gandhi S, Rovi S, Vega M, Johnson MS, Ferrante J, Chen P-H. Intimate partner violence and cancer screening among urban minority women. J Am Board Fam Med. 2010;23(3):343–353. https://doi:10.3122/jabfm.2010.03.090124.
- Jetelina KK, Carr C, Murphy CC, Sadeghi N, S. Lea J, Tiro JA. The impact of intimate partner violence on breast and cervical cancer survivors in an integrated, safety-net setting. J Cancer Surv. 2020;14(6):906–914. https://doi:10.1007/s11764-020-00902-x.
- Speakman E, Paris R, Giojella ME, Hathaway J. "I didn't fight for my life to be treated like this!": the relationship between the experience of cancer and intimate partner abuse. *Health Soc Work*. 2015;40(1):51–58. https://doi:10.1093/hsw/hlu040.
- Whittemore R, Knafl K. The integrative review: updated methodology. J Adv Nurs. 2005;52(5):546–553. https://doi:10.1111/j.1365-2648.2005.03621.x.
- Hong QN, Pluye P, Fàbregues S, et al. Improving the content validity of the mixed methods appraisal tool: a modified e-Delphi study. *J Clin Epidemiol.* 2019;111(7): 49–59. https://doi:10.1016/j.jclinepi.2019.03.008.
- Coker AL, Hopenhayn C, DeSimone CP, Bush HM, Crofford L. Violence against women raises risk of cervical cancer. J Womens Health (Larchmt). 2009;18(8): 1179–1185. https://doi:10.1089/jwh.2008.1048.
- Rafael RMR, Moura A. Severe intimate partner physical violence as a risk factor for inadequate cervical cancer screening. *Cad Saúde Pública*. 2017;33(12):e00074216. https://doi:10.1590/0102-311x00074216.
- Coker A, Follingstad D, Garcia L, et al. Intimate partner violence and women's cancer quality of life. *Cancer Causes Control*. 2017;28(1):23–39. https://doi:10.1007/s10 552-016-0833-3.
- Loxton D, Powers J, Schofield M, Hussain R, Hosking S. Inadequate cervical cancer screening among mid-aged Australian women who have experienced partner violence. *Prev Med.* 2009;48(2):184–188. https://doi:10.1016/j.ypmed.2008.10.019.
- Massetti GM, Townsend JS, Thomas CC, Basile KC, Richardson LC. Healthcare access and cancer screening among victims of intimate partner violence. J Womens Health (Larchmt). 2018;27(5):607–614. https://doi:10.1089/jwh.2017.6402.
- Coker AL, Sanderson M, Fadden MK, Lucia P. Intimate partner violence and cervical neoplasia. J Wom Health Gend Base Med. 2000;9(9):1015–1023. https://doi:10.1089/ 15246090050200051.
- Cesario SK, McFarlane J, Nava A, Gilroy H, Maddoux J. Linking cancer and intimate partner violence: the importance of screening women in the oncology setting. *Clin J Oncol Nurs.* 2014;18(1):65–73. https://doi:10.1188/14.Cjon.65-73.
- Thananowan N, Vongsirimas N. Factors mediating the relationship between intimate partner violence and cervical cancer among Thai women. J Interpers Violence. 2016; 31(4):715–731. https://doi.10.1177/0886260514556108.
- Onishi H, Sairenji M, Yamashita K, et al. Victims of physical abuse among patients with cancer referred to psychiatric clinic in a cancer center hospital: a pilot study. *Palliat Support Care*. 2005;3(1):39–42. https://doi:10.1017/s1478951 505050066.
- Sawin EM, Parker B. "If looks would kill then I would be dead": intimate partner abuse and breast cancer in older women. J Gerontol Nurs. 2011;37(7):26–35. https://doi:10.3928/00989134-20110307-01.
- Cao J, Lee C-Y, Liu X, Gonzalez-Guarda RM. Risk and protective factors associated with intimate partner violence against Chinese women: a systematic review. *Trauma Violence Abuse*. 2023;24(2):407–419. https://doi:10.1177/152483802110 30235.
- Martino MA, Balar A, Cragun JM, Hoffman MS. Delay in treatment of invasive cervical cancer due to intimate partner violence. *Gynecol Oncol.* 2005;99(2): 507–509. https://doi:10.1016/j.ygyno.2005.06.034.
- Sawin EM, Laughon K, Parker BJ, Steeves RH. Breast cancer in the context of intimate partner violence: a qualitative study. Oncol Nurs Forum. 2009;36(6): 686–692. https://doi:10.1188/09.Onf.686-692.
- Culver Wygant CR, Bruera E, Hui D. Intimate partner violence in an outpatient palliative care setting. J Pain Symptom Manage. 2014;47(4):806–813. https://doi:10 .1016/j.jpainsymman.2013.05.018.
- Dutta T, Haderxhanaj L, Agley J, Jayawardene W, Meyerson B. Association between individual and intimate partner factors and cervical cancer screening in Kenya. *Prev Chronic Dis.* 2018;159(12):151–157. https://doi:10.5888/pcd15. 180182.
- Wilm J, Schüler-Toprak S, Ortmann O. [Screening for cervical and breast cancer]. Pathologe. 2016;37(5):477–489. https://doi:10.1007/s00292-016-0228-y.
- Alcalá HE, Mitchell E, Keim-Malpass J. Adverse childhood experiences and cervical cancer screening. J Womens Health (Larchmt). 2017;26(1):58–63. https://doi:10.10 89/jwh.2016.5823.
- Watson-Johnson LC, Townsend JS, Basile KC, Richardson LC. Cancer screening and history of sexual violence victimization among U.S. adults. J Womens Health (Larchmt). 2012;21(1):17–25. https://doi:10.1089/jwh.2011.2751.
- Nicolai MPJ, Keller JJ, de Vries L, et al. The impact of sexual abuse in patients undergoing colonoscopy. *PLoS One*. 2014;9(1):e85034. https://doi:10.1371/journ al.pone.0085034.
- Gerino E, Caldarera AM, Curti L, Brustia P, Rolle L. Intimate partner violence in the golden age: systematic review of risk and protective factors. *Front Psychol.* 2018;4(9): 1589–1595. https://doi:10.3389/fpsyg.2018.01595.
- Mejri N, Lajnef J, Berrazega Y, et al. Intimate partner violence after cancer diagnosis: an SOS call. Support Care Cancer. 2023;31(2):103–112. https://doi:10.1007/s0052 0-022-07571-9.
- Dutton MA, Goodman LA. Coercion in intimate partner violence: toward a new conceptualization. Sex Roles. 2005;52(11-12):743–756. https://doi:10.1007/ s11199-005-4196-6.
- Wise LA, Palmer JR, Boggs DA, Adams-Campbell LL, Rosenberg L. Abuse victimization and risk of breast cancer in the Black Women's Health Study: abuse and breast cancer risk in black women. *Cancer Causes Control.* 2011;22(4):659–669. https://doi:10.1007/s10552-011-9738-3.

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- 39. Sawin EM. 'My husband would not help me, so I was driving over there': older rural women experiencing breast cancer with a non-supportive intimate partner. *Rural Rem Health.* 2010;10(4):1536–1547.
- Sawin EM, Parker B. "If looks would kill then I would be dead": intimate partner abuse and breast cancer in older women. J Gerontol Nurs. 2011;37(7):1–10. https://doi:10.3928/00989134-20110307-01.
- Sawin EM. "The Body Gives Way, Things Happen": older women describe breast cancer with a non-supportive intimate partner. Eur J Oncol Nurs. 2012;16(1):64–70. https://doi:10.1016/j.ejon.2011.03.006.
- Canady BE, Naus MJ, Babcock JC. Physical and psychological abuse in breast cancer survivors and cancer-free women. J Psychosoc Oncol. 2010;28(4):351–360. https://doi:10.1080/07347332.2010.485245.
- O'Connor J, Nikolova K, Cardenas I, Snyder S. The mediating effect of traditional gender beliefs on the relationship between gender disparities and intimate partner violence perpetration. J Aggress Maltreat Trauma. 2023;32(1-2):53–70. https://doi:10 .1080/10926771.2022.2088322.
- King KA, Yockey RA, Vidourek RA. Transgender individuals and psychological intimate partner violence: a national study. J Fam Violence. 2022;37(2):289–300. https://doi:10.1007/s10896-020-00219-4.
- Savage MW, Scarduzio J, Milne K. News stories of intimate partner violence: an experimental examination of media framing and perpetrator sex in LGBTQ versus heterosexual relationships. J Interpers Violence. 2022;37(23):224–249. https:// doi:10.1177/08862605211071143.