JCN Journal of Clinical Nursing

Journal of Clinical Nursing

REVIEW

Violence against women and cervical cancer screening: a systematic review

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Aims and objectives. To present a systematic review of papers published on the relationship between violence against women and cervical cancer screening.

Background. Violence against women is a serious public health problem. This phenomenon can have negative effects on victims' health and affect the frequency at which they receive cervical cancer screening.

Design. A systematic literature review.

Methods. This study was carried out in October 2015 with searches of the Lilacs, PubMed and Web of Science databases using the following keywords: violence, domestic violence, battered women, spouse abuse, Papanicolaou test, vaginal smears, early detection of cancer and cervix uteri.

Results. Eight papers published between 2002–2013 were included in this review, most of which were cross-sectional studies. Three studies found no association between victimisation and receiving Pap testing, and five studies reported an association. These contradictory results were due to higher or lower examination frequencies among the women who had experienced violence.

Conclusion. The results of this study indicate that the association between violence against women and cervical cancer screening remains inconclusive, and they demonstrate the need for more detailed studies to help clarify this relationship.

Relevance to clinical practice. Professionals who aid women should be knowledgeable regarding the perception and detection of violence so that they can interrupt the cycle of aggression, which has harmful impacts on victims' health.

What does this paper contribute to the wider global clinical community?

- The relationship between violence against women and cervical cancer screening is unclear and must be better clarified.
- Healthcare providers must seek to embrace actions that provide integral, holistic, and quality care to women who have experienced violence.
- This review points to the need to provide broad access to healthcare to women at higher risk, as well as health education to increase these women's knowledge and promote their autonomy.

Key words: battered women, domestic violence, Papanicolaou test, spouse abuse, vaginal smear, violence against women

Accepted for publication: 5 April 2016

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Introduction

Violence against women represents a serious public health issue that impacts different cultures and societies. According to the World Health Organization (WHO), this phenomenon affects approximately one-third of all women globally (WHO 2013). Worldwide data indicate that in emerging-economy countries such as Nepal and India, approximately half of married women between 15–24 years old have already experienced some type of violence by their partners (Babu & Kar 2009, Lamichhane *et al.* 2011). In São Paulo, the largest city in the Latin American country of Brazil, the WHO has reported that approximately 42% of women have suffered from psychological violence, 27% from physical violence and 10% from sexual violence (Schraiber *et al.* 2007).

Experiencing violence may have negative consequences on the victims that affect several aspects of their lives. These woman may suffer from health issues, ranging from physical injuries to emotional damage, causing depression and anxiety (Guedes *et al.* 2009), and the experience may lead to smoking (Breiding *et al.* 2008), excessive alcohol consumption (Breiding *et al.* 2008), the development of cervical cancer (Coker *et al.* 2009) and an increased risk of HIV infection (Breiding *et al.* 2008). In this sense, healthcare providers have the opportunity not only to identify and refer victimised women but also to assist them according to their needs, providing integral care based on treatment of the consequences of violence with a focus on preventive actions (Guedes *et al.* 2009). Among such actions, preventing cervix cancer, the third most common cause of neoplasia and the fourth most common cause of death among women worldwide (Jemal *et al.* 2011), stands out in importance.

One of the ways to prevent this type of cancer is the early diagnosis of cervical lesions before they become invasive through screening techniques, such as oncologic colpocytology or the Pap test, colposcopy, cervicography, and tests to detect human papillomavirus DNA in cytology smears or histopathological samples. The Pap test is considered the most effective and efficient detection method in screening programmes for cervical uterine cancer, and it has been widely used for over 40 years (Pinho & França-Junior 2003).

With regard to testing frequency, programmes carried out in European countries, such as France, Italy and England, prioritise the testing of women between the ages of 20–65 years, with one test performed every three years. Other countries, such as Germany, perform annual testing and focus on all women aged 20 years or older (Linos & Riza 2000). In the USA, testing is recommended for women starting at the age of 18 years or at the time of the first sexual encounter, either every year or every three years. Moreover, women are advised to discontinue screening after 65 years of age if previous tests have been consistently negative (Zoorob *et al.* 2001). In Brazil, testing is recommended every three years when two negative results are obtained one year apart. For sexually active women, testing is recommended from ages 25–64, unless the results of two consecutive tests have been negative during the last five years (Instituto Nacional de Câncer 2011).

Despite the benefits of the Pap test, test coverage is unfortunately low in some regions, even below the 80% recommended by the WHO (WHO 2002). Healthcare surveys conducted in Italy and England have shown that 53% of Italian women (Ronco *et al.* 1991) and 77% of English women (Schwartz *et al.* 1989) have undergone Pap testing at least once. In Mexico, the testing prevalence is below 30% (Lazcano-Ponce *et al.* 1997), whereas, in Brazil, it is 75% (Correa *et al.* 2012). These findings demonstrate the differences in the access to and receipt of the Pap test among women, and they indicate the potential existence of factors that hinder access to healthcare. Among them, violence against women, particularly in the household by family members or partners, seems to influence the use of healthcare by women (Zoorob *et al.* 2001).

Thus, considering that deepening the study of violence against women by examining its association with cervical cancer screening may reveal insights into the impacts of violence on women's lives, this study aimed to perform a systematic review of the relationship between violence against women and cervical cancer screening.

Method

This is a systematic review, which is a summary of current information available on a specific issue obtained objectively and reproducibly. This type of research employs a rigorous method to search for and select studies by assessing the relevance and validity of the results reported and the methods of data collection, synthesis and interpretation (Sampaio & Mancini 2007). Thus, a protocol was created to ensure a rigorous research process including the following components: review questions, inclusion and exclusion criteria, search strategies, databases for study selection and data analysis and synthesis.

The following question was asked: What is the relationship between violence against women and application of the Pap test? To identify articles on the subject, a search was conducted in October 2015 of the LILACS, National Library of Medicine and National Institutes of Health (PubMed) and

Web of Science databases using a combination of the following keywords: 'violence AND Papanicolaou test,' 'domestic violence AND Papanicolaou test,' 'battered women AND Papanicolaou test,' 'spouse abuse AND Papanicolaou test,' 'violence AND vaginal smears,' 'domestic violence AND vaginal smears,' 'battered women AND vaginal smears,' 'spouse abuse AND vaginal smears,' 'violence AND early detection of cancer,' 'domestic violence AND early detection of cancer,' 'battered women AND early detection of cancer,' 'spouse abuse AND early detection of cancer,' 'violence AND cervix uteri,' 'domestic violence AND cervix uteri,' 'battered women AND cervix uteri' and 'spouse abuse AND cervix uteri.' No time frame was set so that all references available in these databases could be identified. Furthermore, the bibliographical references of the selected papers were evaluated so that other potentially relevant studies could be identified. The following inclusion criteria were applied: original research article and/or thesis written in Portuguese, English or Spanish with data on the relationship between violence against women and the Pap test. The exclusion criteria were as follows: review study.

Only one paper was identified in the LILACS database, while 140 and 10 were found in PubMed and Web of Science respectively. Of these 151 papers, 88 were repeat studies. Of the 63 titles evaluated, 40 were excluded for lacking relevance to the study subject. Of the 23 abstracts read, nine were excluded for not examining the association between violence and cervical cancer screening. Of the 14 studies read in full, six were considered eligible, while two others were identified in the bibliographical references of studies that were already included. Figure 1 shows a flow chart of the study selection process performed according to the PRISMA protocol (Moher *et al.* 2009).

The entire process of selecting the studies for inclusion in this review, from the search to selection of the papers by analyses of the titles, abstracts, and full-text articles in the three databases, except for examination of the references of the selected the papers, was carried out independently by two researchers (FMCL and CCP) who had no disagreements. Descriptive analysis of the studies was conducted on the data extracted from the eligible papers. The following information was extracted: the author/year, journal of publication, title, country of research, type of study, goal, sample size, age groups and main results. Additionally, to assess the methodological quality of the articles, we used the scale proposed by Downs & Black, which includes a checklist for evaluating the quality of information, internal validity (bias and confounders), power of the study and external validity (Downs & Black 1998). Of the 27 questions of this scale, 18 were used in present analysis (Table 3) because the others were not applicable to the observational studies included in this review. Thus, the papers were analysed regarding: (1) the hypotheses or goals; (2) clear descriptions of the main outcomes to be measured; (3) characteristics of the included subjects; (4) clear description of the variable of exposure; (5) distribution of the main confounding variables; (6) whether the main findings were described; (7) effects of estimated random variability in the data on the main outcomes; (8) characteristics of the losses to follow-up; (9) information on the probability values for the main outcomes; (10) representativeness of the subjects invited to take part in the study; (11) representativeness of the subjects included in the study; (12) whether the study adjusted for different follow-up periods for cohort studies; (13) whether the statistical tests used were appropriate for measuring the main outcomes; (14) whether the measures used for the main outcomes were reliable; (15) whether subjects in different groups were recruited from the same population; (16) whether subjects in different groups were recruited during the same time period; (17) whether the study adjusted for the main confounding variables; and (18) whether the study had enough power to detect an important effect with 5% significance and 80% power. Each question received a score of 0 (no) or 1 (yes), except for question five, which received a score of 0–2. Considering the adjustments made to the scale, the maximum score possible for the evaluated papers was 19 points.

Results

Information on the included studies is presented in Table 1. These studies were recently published; the two oldest articles identified were published in 2002 (Farley *et al.* 2002, Lemon *et al.* 2002), and the most recent articles were published in 2013 (Brown *et al.* 2013, McCall-Hosenfeld *et al.* 2013). Most of the papers were published in journals focused on public health, and all were available in English only. While nearly all of the studies (seven) were carried out in the USA (Farley *et al.* 2002, Lemon *et al.* 2002, Coker *et al.* 2006, Modesitt *et al.* 2006, Gandhi *et al.* 2010, Brown *et al.* 2013, McCall-Hosenfeld *et al.* 2013), one was conducted in Australia (Loxton *et al.* 2009). Half of the studies included in this review were cross-sectional (Lemon *et al.* 2002, Modesitt *et al.* 2006, Gandhi *et al.* 2010, Brown *et al.* 2013), three had a cohort design (Coker *et al.* 2006, Loxton *et al.* 2009, McCall-Hosenfeld *et al.* 2013) and one was a case–control study (Farley *et al.* 2002). The sample sizes of the studies ranged from 101 (Modesitt *et al.* 2006) to 30,000 women (Brown *et al.* 2013), the youngest of whom were 16 years old (Coker *et al.* 2006).

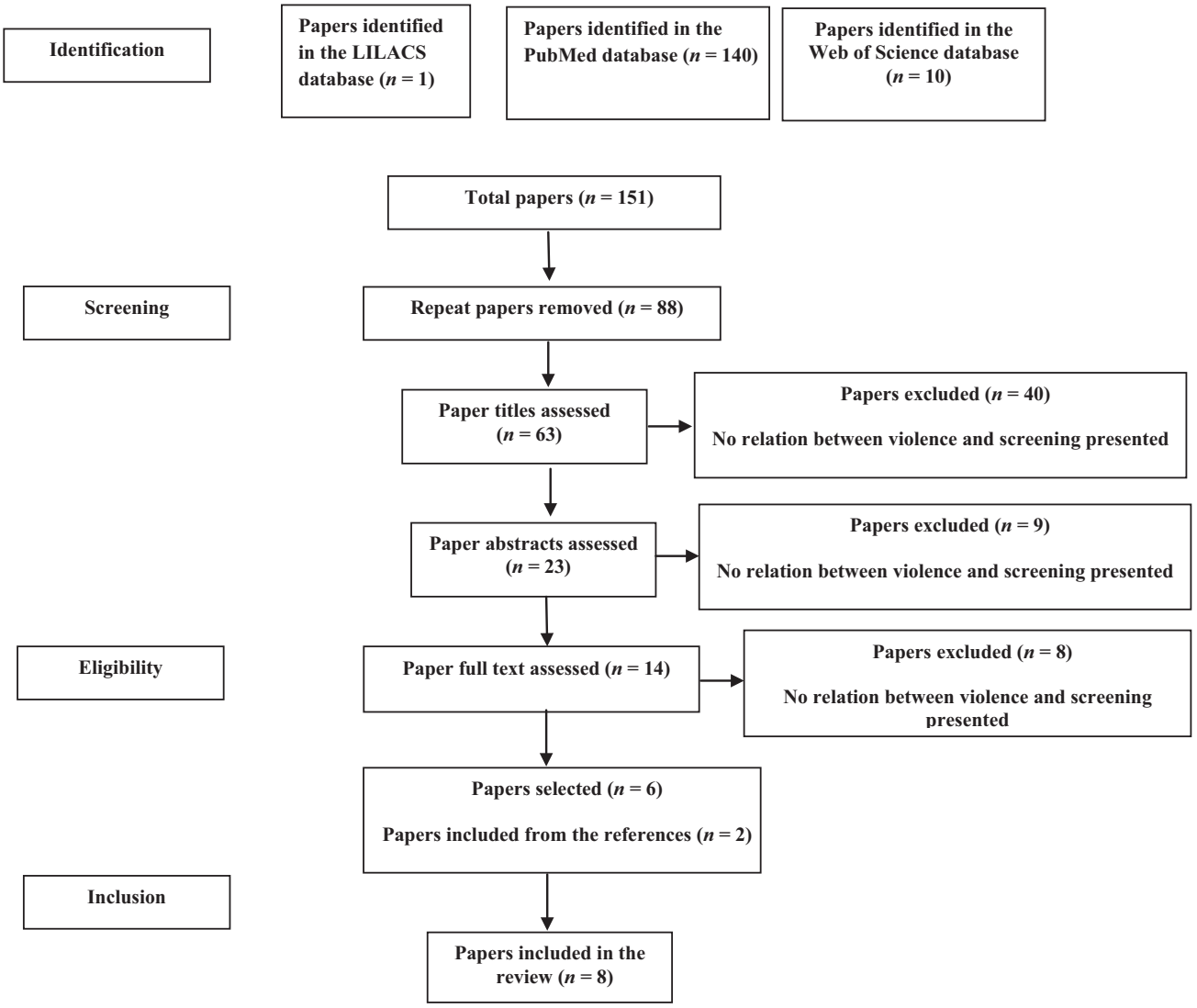

Figure 1 PRISMA flow chart of the search and selection process of the studies included in the review.

Table 1 Characterisation of the studies on violence against women and cervical cancer screening according to author, year, journal, title, country, type of study, sample and age group. October 2015

Authors	Year	Journal of publication	Country of research	Type of study	Sample	Age group (years)
Brown *et al.*	2013	Journal of Women's Health	USA	Cross-sectional	30,182	≥18
McCall-Hosenfeld *et al.*	2013	Women's Health Issues	USA	Cohort	1420	18–45
Gandhi *et al.*	2010	Journal of the American Board of Family Medicine	USA	Cross-sectional	382	≥21
Loxton *et al.*	2009	Preventive Medicine	Australia	Cohort	7312	45–50
Coker *et al.*	2006	Cancer Epidemiology Biomarkers and Prevention	USA	Cohort	470	≥16
Modesitt *et al.*	2006	Obstetrics & Gynecology	USA	Cross-sectional	101	≥18
Farley *et al.*	2002	Journal of Family Practice	USA	Case–control	736	21–64
Lemon *et al.*	2002	Journal of Women's Health and Gender Based Medicine	USA	Cross-sectional	1643	18–54

The main results of the eight studies included in this review are presented in Table 2. In three of them, no relationship was found between violence against women and cervical cancer screening (Modesitt *et al.* 2006, Loxton *et al.* 2009, McCall-Hosenfeld *et al.* 2013). However, it must be noted that an association within the significance threshold ($p = 0{\cdot}062$) was identified in one of the studies (Modesitt *et al.* 2006), while another (Loxton *et al.* 2009) found that spousal abuse was associated with inadequate Pap testing (OR: 1·20; CI 95%: 1·01–1·42) after adjusting for some confounding factors (education level, income, marital status, chronic diseases and depression). However, this association was no longer significant after adjusting for access to healthcare (OR: 1·18; CI 95%: 0·99–1·40), although it was close to the significance threshold (Loxton *et al.* 2009).

The results of the other studies included in this review revealed a relationship between being a victim of violence and receiving Pap testing (Farley *et al.* 2002, Lemon *et al.* 2002, Coker *et al.* 2006, Gandhi *et al.* 2010, Brown *et al.* 2013). A population-based study of women aged 18 years or older who had experienced physical and/or sexual violence by their intimate partners at least one time revealed that these women were twice as likely to undergo Pap screening (OR: 2·05; CI 95%: 1·26–3·31) (Brown *et al.* 2013). Likewise, another cross-sectional study on women between 18–54 years of age found that physical violence by an intimate partner was associated with current Pap screening (OR: 2·39; CI 95%: 1·01–5·70) (Lemon *et al.* 2002). However, a cohort study of women with abnormal screening results showed that victims of physical violence were at a 70% increased risk of discontinuing cytopathology follow-up (RR: 1·7; CI 95%: 1·3–2·2) (Coker *et al.* 2006).

Finally, the other two studies (Farley *et al.* 2002, Gandhi *et al.* 2010) suggested that victims of violence were less likely to undergo preventive screening. A study on healthcare users showed that women between 40–74 years of age who have been victims of emotional abuse, rather than physical and/or sexual abuse, were 87% less likely to undergo regular Pap screening (OR: 0·13; CI 95%: 0·02–0·86) (Gandhi *et al.* 2010). Similarly, a case–control study of women who had undergone cervical cancer screening vs. those who had not undergone screening showed that those who had been sexually abused prior to 18 years of age were less likely to have been screened (36% vs. 50%, $n = 694$, $p = 0{\cdot}050$) (Farley *et al.* 2002).

Table 3 presents the results of quality analysis of the studies included in this review based on the criteria of Downs & Black. The median score in this evaluation was 15 points (minimum of 8 and maximum of 16 points). Analysis of the 18 criteria indicated that all of the studies clearly presented the hypotheses, goals, outcomes and exposition. Further, the statistical tests used were considered adequate for all eight studies, and *p*-values were provided. On the other hand, none of the cohort studies adjusted for differences in follow-up duration.

Discussion

Violence against women is a worldwide problem that crosses racial and socio-economic borders and its impact on health must be better understood, particularly its association with cervical cancer screening. In this review, only eight papers were found on this subject (Farley *et al.* 2002, Lemon *et al.* 2002, Coker *et al.* 2006, Modesitt *et al.* 2006, Loxton *et al.* 2009, Gandhi *et al.* 2010, Brown *et al.* 2013, McCall-Hosenfeld *et al.* 2013). A lack of consensus was observed among the studies. While some authors reported an association between violence and cervical cancer screening (Farley *et al.* 2002, Lemon *et al.* 2002, Coker *et al.* 2006, Gandhi *et al.* 2010, Brown *et al.* 2013), others reported no such association (Modesitt *et al.* 2006, Loxton *et al.* 2009, McCall-Hosenfeld *et al.* 2013).

Two studies (Lemon *et al.* 2002, Brown *et al.* 2013) reported a higher frequency of cytopathology testing among victims compared to nonvictims, which suggests that the former seek healthcare services more frequently than the latter. An association between violence and an increased frequency of seeking healthcare services has been reported in other studies (Rivara *et al.* 2007, Schraiber *et al.* 2010). This finding can be explained by the impacts of violence on the health of victims, ranging from acute effects, such as lesions and trauma that cause the women to seek emergency care, to indirect and long-term effects, such as chronic pain, gastrointestinal problems, fibromyalgia, sexually transmitted diseases, recurrent urinary tract infections, menstrual issues and sexual dysfunction and compromised mental health (Plichta 2004). Thus, using healthcare to treat chronic diseases or to receive intervention could provide women with more chances of receiving preventive care and therefore cause them to be more likely of undergoing cervical cancer screening (Gasperin *et al.* 2011).

On the other hand, some studies reported a reduced frequency of Pap testing (Farley *et al.* 2002, Gandhi *et al.* 2010) or an increased risk of discontinuing follow-up (Coker *et al.* 2006) among women who have experienced violence. This reduced use of healthcare might be associated with partners' controlling behaviours (Martino *et al.* 2005) or with a lower perception of risk by women who have experienced violence, resulting in a decreased frequency of preventive testing (Cronholm & Bowman 2009).

Table 2 Categorisation of the studies on violence against women and Pap screening according to the study sample, outcome, exposition, statistical analysis and results for studies published between 2002–2013. October 2015

Authors	Study sample	Outcome	Exposition	Statistical analysis	Results
Brown *et al.*	Population-based study of women aged 18 years or older whose answers were validated with a questionnaire on intimate partner violence	Questions related to preventive healthcare practices (HIV testing, cervical cytology, colorectal cancer, cholesterol, breast examination and mammography)	Experience of physical and/or sexual violence by an intimate partner during lifetime	Multivariable logistic regression models were used to test association between lifetime IPV and preventive screening behaviours, adjusting for age, race/ethnicity, income, educational status, marital status and insurance status	After adjusting for confounding factors (age, race/ethnicity, annual household income, education, marital status and insurance status), intimate partner violence was associated with receiving Pap screening (OR: 2·05; CI 95%: 1·26–3·31)
McCall-Hosenfeld *et al.*	Population-based study of women between 18–45 years old	Preventive services received over two-year follow-up period (safety/violence counselling, Pap testing, STI/HIV testing, and smoking, alcohol/drug use and STI/HIV counselling)	Experience of physical and/or sexual violence by an intimate partner during the last 12 months	Multiple logistic regression analysis assessed the impact of IPV on service receipt, controlling for relevant covariates (age, race/ethnicity, and educational level)	Exposure to intimate partner violence was not associated with receiving Pap screening ($p = 0·623$)
Gandhi *et al.*	Healthy women treated by healthcare services	Cervical cancer screening of women with a Papanicolaou smear report dated within the last three years	Experience of violence by an intimate partner; emotional, physical and/or sexual	Logistic regression models were used to examine whether nonvictims, victims of emotional abuse and victims of physical and/or sexual abuse were up to date with Papanicolaou testing	Victims of emotional abuse compared to victims of physical and/or sexual abuse, who were between 40–74 years old were 87% less likely to undergo regular Pap screening (OR: 0·13; CI 95%: 0·02–0·86)

Table 2 (continued)

Authors	Study sample	Outcome	Exposition	Statistical analysis	Results
Loxton *et al.*	Population-based study of women between 45–50 years old	Health status, depression, health service use, preventive screening (cervical cancer screening was considered adequate for women who reported having had a Pap test during the past two years)	Experience of violence by an intimate partner, either currently or in the past	Multivariable logistic regression models were used to examine the relationships between spousal abuse and subsequent inadequacy of Pap testing, adjusted for socio-demographic and health factors	After adjusting for confounding factors (educational level, income, marital status, chronic diseases and depression), violence was associated with inadequate Pap testing (OR: 1·20; CI 95%: 1·01–1·42). However, following adjustment for access to healthcare, this association was not significant (OR: 1·18; CI 95%: 0·99–1·40)
Coker *et al.*	Women with abnormal Pap test results treated by healthcare services	Discontinuation in the receipt of follow-up care	Stressors, spousal abuse, relationship stressors, housing instability and violence/legal stressors	Chi-squared test and multivariable analysis	Severe physical spousal abuse was associated with discontinuing Pap test follow-up (RR: 1·7; CI 95%: 1·3–2·2)
Modesitt *et al.*	Women with breast, cervical, endometrial or ovarian cancer aged 18 years or older and recruited by healthcare services	Socio-demographic variables, ethnicity, marital status, Pap testing, mammogram, colon cancer screening, reproductive and sexual health, smoking, alcohol/drug use, healthcare access and use, insurance and medical care and family history of cancer	History of violence during lifetime	Multinomial logistic regression model was used for multivariable analysis	No difference was found in cervical cancer screening between victims and nonvictims of violence ($p = 0·062$)

Table 2 (continued)

Authors	Study sample	Outcome	Exposition	Statistical analysis	Results
Farley *et al.*	Women who had or had not received Pap screening during the previous two years	Attitudes towards Pap screening based on previous findings	Trauma history was measured in two ways: lifetime trauma and childhood trauma	Hierarchical logistic regression model was used to evaluate associations of traumatic events with screening	Women sexually abused before 18 years old were less likely to undergo cervical cancer screening (36% vs. 50%, $n = 694$, $p = 0{\cdot}050$)
Lemon *et al.*	Women between 18–54 years old in the Rhode Island Behavioural Risk Factor Surveillance System	Preventive healthcare: checkups, clinical breast examinations, Pap smear screening, cigarette smoking and high-risk alcohol use	Experience of physical and psychological violence during the past 12 months	Logistic regression controlling for age, race, marital status, education level, insurance status, and functional disability	Physical intimate partner violence was associated with receiving Pap screening (OR: 2·39; CI 95%: 1·01–5·70)

Table 3 Evaluation criteria adapted from Downs & Black

Quality of the information	Number of papers	
	Adequate	Inadequate
1. Is the hypothesis/aim/ objective of the study clearly described?	8	0
2. Are the main outcomes to be measured clearly described in the Introduction or Methods section?	8	0
3. Are the characteristics of the patients included in the study clearly described?	6	2
4. Are the interventions of interest clearly described?*	8	0
5. Are the distributions of principal confounders in each group of subjects to be compared clearly described?	7	1
6. Are the main findings of the study clearly described?	8	0
7. Does the study provide estimates of the random variability in the data for the main outcomes?	7	1
8. Have the characteristics of patients lost to follow-up been described?	3	5
9. Have actual probability values been reported (e.g., 0·035 rather than <0·05) for the main outcomes except for probability values of <0·001?	8	0
10. Were the subjects asked to participate in the study representative of the entire population from which they were recruited?	5	3
11. Were those subjects who were prepared to participate representative of the entire population from which they were recruited?	4	4
12. In cohort studies, do analyses adjust for different lengths of follow-up, or in case–control studies, is the time period between the exposition and outcome the same for cases and controls?	0	8

Table 3 (continued)

Quality of the information	Number of papers	
	Adequate	Inadequate
13. Were the statistical tests used to assess the main outcomes appropriate?	8	0
14. Were the main outcome measures used reliable?	8	0
15. Were the patients in different groups (trials and cohort studies) recruited from the same population or were the cases and controls (case–control studies) recruited from the same population?	3	5
16. Were the study subjects in different groups (trials and cohort studies) or were the cases and controls (case–controls studies) recruited over the same time period?	3	5
17. Were there adequate adjustments for confounding variables in analyses from which the main findings were drawn?	7	1
18. Did the study have sufficient power to detect a clinically important difference with a <5%? Probability that the difference was due to chance?	3	5

*The word 'interventions' was used in place of variable of exposure.

Another relevant issue is access to healthcare considering that the association between violence and cervical cancer screening ceased to exist after adjusting for this variable (OR: 1·18; CI 95%: 0·99–1·40). (Loxton *et al.* 2009). Thus, access to healthcare, as well as continuity of care, must be discussed in this context, as it represents an important element of healthcare systems (Andersen & Newman 1973). Notably, the use of healthcare is the result of interaction between an individual seeking care and a professional who provides it within the healthcare system. While the individual's behaviour is usually responsible for the first contact with healthcare services, the professional is responsible for future contacts and in turn, he/she largely determines the type and extent of resources consumed to solve the individual's health issues (Travassos & Martins 2004). Promoting continuous care strengthens the relationship between healthcare providers and patients, promoting the increased trust and compliance of these women with healing and preventive practices (Pinho & França-Junior 2003).

The results of analysis of the included studies suggest that the interaction between women who experience violence and the use of preventive healthcare is complex and remains understudied. This phenomenon can have impacts that transcend physical health, including repercussions on mental health, which can result in inability of these women to care for themselves and others, possibly reflected by a reduced frequency of seeking preventive healthcare (Pinho & França-Junior 2003).

In this context, healthcare services must seek to reduce the vulnerability of women, particularly regarding inequalities in gender relations. Professionals must be aware and alert to the iniquities present in the access and use of healthcare and discuss violence against women. They must face this issue as a legitimate necessity in healthcare and help the women themselves become active players in terminating abusive relationships. Inequalities restrict autonomous participation in decision-making regarding family-, conjugal- and work-related issues, the ability to take part in sexual and reproductive negotiations and the access to and use of preventive care, such as the Pap test (Pinho & França-Junior 2003).

Shortcoming

It is worth pointing out that the main databases were searched and the secondary papers were retrieved from the references of the eligible studies. However, the small number of studies on this subject can be considered a limitation of the present review.

Recommendations

In this review, few studies were found on the association between violence against women and cervical cancer screening, which points to a significant gap in the literature. Thus, further studies are recommended to investigate the relationship between these two phenomena to obtain deeper and more critical insights into the topic.

Conclusion

This review concludes that the association between violence against women and cervical cancer screening is unclear and must be further elucidated because both these issues are relevant to women's health. Because violence is a severe public health issue, healthcare providers must become knowledgeable on this subject so that they obtain a broader view and seek to embrace actions that provide integral, holistic and

quality care to women who have experienced violence. Preventive actions against cervical cancer must be taken to promote compliance by women, in addition to their active participation in seeking healthcare services, such as ensuring that the women are informed and cared for based on their individual needs and particularities.

Relevance for clinical practice

This review reveals the importance of investigating violence against women as part of routine healthcare at all levels. It also highlights the need to provide broad access to healthcare to women at higher risk, as well as to provide health education to increase these women's knowledge and promote their autonomy.

Contributions

Contributed to conception, design, analysis and drafted this article: FMCL; contributed to data extraction, screening for inclusion and critically revised this article: CCP, FMCL; contributed to design and critically revised this article: MHCA, DPG; All authors have approved this version and agree to be accountable for all aspects of work ensuring integrity and accuracy.

Conflict of interest

There is no conflict of interest and source of funding.

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