



A key mission of the Center for Research on Violence Against Women is to ensure that the findings of quality research make it into the hands of advocates. This translation of research to practice ensures that science has an impact on the lives of women and children.

In 2010 the Center for Research on Violence Against Women conducted a survey with over 100 rape crisis and domestic violence advocates in Kentucky about what they needed to know from research to help them do their jobs. Advocates identified ten top issues. A series of ten briefs were prepared by the Center to answer the Top Ten Things Advocates Need to Know.

TOP TEN THINGS ADVOCATES NEED TO KNOW

1. What services do survivors of rape find most helpful, and what help do they say they need?
2. What type of sex offender is most likely to recommit their crimes? Incest offenders, rapists, or pedophiles?
3. What mental health issues are caused by experiencing intimate partner violence or sexual assault?
4. Do protective orders work? Who violates protective orders the most?
5. What is the impact of mandatory arrest laws on intimate partner violence victims and offenders?
- 6. WHAT ARE THE MOST SIGNIFICANT LONG-TERM HEALTH CONSEQUENCES OF CHRONIC SEXUAL OR PHYSICAL VIOLENCE?**
7. What percentage of rape cases gets prosecuted? What are the rates of conviction?
8. Does treatment with intimate partner violence offenders work?
9. Does a report of intimate partner violence or sexual assault by a partner put a woman at risk of losing custody of her children?
10. How do women from different racial/ethnic backgrounds experience intimate partner violence (IPV) or sexual assault? Does race and ethnicity matter?

For more information on the Center for Research on Violence Against Women and to find PDFs of the Top Ten Things Advocates Need To Know Series, visit www.uky.edu/CRVAW

QUESTION 6:

WHAT ARE THE MOST SIGNIFICANT LONG-TERM HEALTH CONSEQUENCES OF CHRONIC SEXUAL OR PHYSICAL VIOLENCE?

REPORT AT A GLANCE

- Chronic physical, sexual, or psychological abuse can have a long-lasting impact on a woman even after the abuse or the relationship has ended.
- The most direct health consequence of chronic intimate partner violence is the possibility of death.
- Intimate partner violence may directly impact a woman's health through physical attacks and related injuries - chronic pain, broken bones, arthritis, hearing or sight deficits, seizures, or frequent headaches.
- Abuse victims can often suffer repeated "mild" brain injury that can have a lifelong impact which includes: sleep disturbances, headaches, dizziness, depression, irritability, anxiety, changes in social or sexual behavior, speech problems, cognitive impairment, and memory issues.
- Sexual violence often co-occurs with partner violence. Sexual violence can lead to vaginal or anal injuries, high levels of stress linked to sexual dysfunction and immune system problems, depression, and increased risk of bacterial infection.
- Abuse can cause ongoing physical and psychological pain, which over an extended period of time results in physiologic changes to stress-response areas of the body's central nervous system. These stressors can lead to life-long changes in the body's functioning and increases vulnerability to chronic pain syndromes and psychological dysfunction.

In 2010 the Center for Research on Violence Against Women conducted a survey with over 100 rape crisis and domestic violence advocates in Kentucky about what they needed to know from research to help them do their jobs. Advocates identified ten top issues. This brief is one in a series of ten prepared by the Center to answer these top ten research questions.

Introduction

Any type of intimate partner violence (IPV) negatively affects the health and well-being of the women who experience it. A single incident of physical or sexual violence, for example, can have both immediate and long-term physical health consequences. When a woman experiences chronic physical, sexual, or psychological abuse by a partner, that violence becomes increasingly likely to have long-lasting impact on her health even after the abuse or relationship has ended. Some of the direct, long-term physical health consequences of violence against women may seem obvious (e.g., disability due to traumatic injury, sexually transmitted infections), but many indirect health consequences are less intuitive and have only been recently examined through high-quality research on disparities in women's health. Thanks to years of advocacy and study, more and more health research now controls for intimate partner violence as a major risk factor in women's health.

This article examines and summarizes research findings about significant, long-term health problems which arise from women's experience of chronic violence. We begin by examining the risk of death and the direct consequences of traumatic injury, and then take a closer look at the indirect linkages between IPV, stress, and chronic illness.

Direct Health Consequences of Violence

The most significant direct health consequence of chronic intimate partner violence is the possibility of death. Data on national homicide trends from 1976 to 2005 shows that 30% of women murdered in the U.S. were killed by an intimate partner, compared to only 5% of male victims (1). A study which interviewed 311 close friends or family of female homicide victims across 11 U.S. cities found that 66% of victims had been abused by their partner prior to the murder,

and that 41% had utilized the health care system due to the abuse (2). Another study from the same data determined that the presence of sexual violence and escalating severity and frequency of physical violence predicted an increased chance of homicide, while having never lived with the abusive partner was a protective factor (3). This study and many previous studies suggest that chronic and worsening violence is especially dangerous at the point of separation from the abuser.

Injuries are common among survivors of intimate partner violence and can lead to chronic health problems or disability over time, especially if women are exposed to repeated similar traumas. As Coker and colleagues (4) explain: "The mechanism by which IPV affects women's health may be direct through repeated physical assaults and resulting injuries. Examples of health consequences through this direct pathway include chronic pain, broken bones, arthritis, hearing or sight deficits, seizures, or frequent headaches" (p.454). For a variety of reasons including abuser control and low socioeconomic status, many women may not seek health services immediately or openly report IPV to health care providers (5). However, a sizeable proportion of women receiving regular family medicine care or coming to an emergency department for other issues report a recent history of ongoing partner violence when surveyed (4, 6). A longer period of abuse is associated with more adverse health effects and higher utilization of health care services (4, 5, 7, 8, 9).

Traumatic Brain Injury

One direct health impact of intimate partner violence with severe long-term consequences is traumatic brain injury. A review of previous research studies by Plichta (10) found that facial injuries were sustained by between 81% and 94% of women with abuse injuries. Banks (11) reviews research on the link between traumatic brain injury (e.g., concussions) and partner violence and finds

evidence that abuse victims can often suffer repeated "mild" brain injury that can have a lifelong impact much in the same way sports medicine research is becoming increasingly aware of the risk of repeated mild concussions in athletes. However, unlike athletes who are given protective gear, rest, and rehabilitation, "there are no on-site monitors for victims of intimate partner violence; therefore, similar injuries in victims of interpersonal violence are not assessed and treated, nor are preventions implemented" (11, p. 292). Moreover, she argues, the symptoms of traumatic brain injury are difficult to diagnose because "there is considerable overlap with posttraumatic stress syndrome (PTSD), dissociation, and substance abuse" (p.292). Potential consequences of traumatic brain injury include sleep disturbances, headaches, dizziness, depression, irritability, anxiety, changes in social or sexual behavior, speech problems, cognitive impairment, and memory issues (4, 11, 12).

Gynecological Problems

Sexual violence by an intimate partner can also lead directly to serious, long-term health problems. According to Campbell (5), "gynecological problems are the most consistent, longest lasting, and largest physical health difference between battered and non-battered women" (p.1332). Sexual violence often co-occurs with partner violence; a study of women in a general practice clinic found that among women who experienced physical violence, 58% also experienced sexual violence (4).

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Sexual violence can include incidents such as controlling verbal sexual degradation, refusal to use condoms, or forced sex. These forms of abuse can lead to external or internal vaginal or anal injuries, high levels of stress linked to sexual dysfunction and immune system problems, depression, increased risk of bacterial infection, and increased exposure to sexually transmitted disease resulting from abusive partners' unprotected sex with others (5, 9, 13).

Moreover, women with a history of childhood or adult sexual abuse are more likely to experience chronic pelvic pain and other gynecological problems than women who were not sexually abused (4, 14), and are at increased risk of developing cervical cancer (15).

Indirect Health Consequences of Violence

Beyond the direct impacts of sexual and physical violence on women's health, research has demonstrated that intimate partner violence is also a significant contributing factor to other chronic health conditions in women. These indirect effects are often difficult for clinicians to recognize and diagnose because they may be unaware of a woman's abuse history and first attempt to rule out other medical causes (8, 16). Groups of symptoms without a known organic cause (i.e., disease or infection) are usually referred to by medical professionals as "syndromes" and many share a common characteristic of increased physical and psychological stress (8). Since long-term intimate partner violence and abuse is a major source of chronic physical and psychological stress, research into these somatic (i.e., bodily) stress syndromes and conditions has discovered an association between a woman's history of violence exposure and lifelong stress-related health and mental health problems.

Stress-Related Physical Illness

Stress-related somatic syndromes include conditions such as fibromyalgia, chronic fatigue syndrome, irritable bowel syndrome, and temporomandibular disorder. A review of research on stress-related somatic syndromes by Crofford (8) finds that patients with these syndromes report higher levels of prior exposure to physical and sexual violence than the general population of women. In addition to stress-related somatic syndromes like those above, exposure to chronic physical and sexual violence has also been linked to chronic pain symptoms (4, 14, 17, 18), chronic inflammation and immune dysfunction (18, 19), migraine headaches, and sleep problems (4, 17). Other research finds that intimate partner violence exposure is linked to physiological and hormonal abnormalities within the nervous system that can lead to heightened pain sensitivity, overactive stress response, aggression, and anxiety (8, 20).

Chronic Conditions Worsened by Violence

Physical and sexual violence has also been shown to worsen the symptoms of more common chronic health problems. A review chapter in *The Sourcebook on Violence Against Women* (21) summarizes: "Violence survivors are also more likely than women who have not experienced violent victimization to have reproductive health problems, such as dysmenorrhea, menorrhagia,

LARGE, HIGH-QUALITY STUDIES LINKING PARTNER VIOLENCE AND HEALTH (36)

Coker, Smith, Bethea, King, & McKeown (4)

Sample: 1,152 families from medical practice clinics.

Key Findings: Psychological partner abuse was associated with increased risk of disabilities preventing work; chronic neck or back pain; arthritis; migraines/frequent headaches; problems seeing with glasses; sexually transmitted infection; chronic pelvic pain; stomach ulcers; spastic colon; indigestion/constipation/diarrhea. Ever experiencing physical partner violence was associated with increased risk of hearing loss; angina/heart/circulatory problems; bladder/kidney infections; hysterectomy; gastric reflux.

Tolman & Rosen (33)

Sample: 753 women receiving welfare in urban Michigan county.

Key Findings: Women who report partner violence had 3 times as many mental health disorders compared to women who had never experienced violence. Even after controlling for demographic differences, recent partner violence was associated with increased

risk of physical health problems.

Plichta & Falik (34)

Sample: 1,821 women in nationally-representative sample.

Key Findings: Intimate sexual violence, including childhood and adult violence, was associated with poor self-assessed health status, disability, chronic health conditions, depressive symptoms, anxiety/depression diagnosis, and taking medications for depression/anxiety.

Kramer, Lorenzon, & Mueller (35)

Sample: 1,268 women from health care setting.

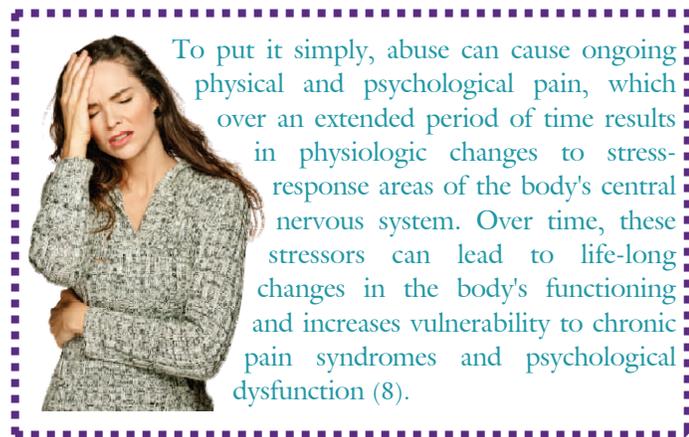
Key Findings: Lifetime partner violence increases likelihood of headaches; stomach problems; chronic pain; seizures; broken bones; sexually transmitted diseases; vaginal bleeding; substance abuse; depression; suicidal thoughts.

Zink, Fisher, Regan, & Pabst (25)

Sample: 995 participants over 55 years old recruited from primary care services.

Key Findings: Participants who report partner violence also report significantly more symptoms of chronic pain, depression/anxiety,

sexual dysfunction, and sexually transmitted diseases. Increased rates of gastrointestinal disorders, including stomach ulcers, spastic colon, gastric reflux, indigestion, and diarrhea, are also found among violence survivors. This research also shows that violence is associated with conditions such as hearing loss and heart disease." (p. 292)



Research suggests that chronic inflammation and depression, both common consequences of violence against women, may be major contributing factors for women's development of cardiovascular disease and metabolic syndrome, the precursor to diabetes (22). Extreme stress and depression over an extended period of time disrupts the body's ability to control inflammation, and thus "the normal feedback loop breaks down and fails to restrain the inflammatory response" (22, p. 119). Preliminary studies suggest that depression in early adulthood and childhood has been linked to early-stage cardiovascular disease and the formation of unstable plaques in the arteries which increases heart attack risk, and these effects appear to be greater for women than men (23, 24). While research is still exploring the scientific and medical reasons for this link, multiple large studies in health care settings clearly demonstrated an association between partner violence and cardiovascular problems (4, 25).

Mental Health and Physical Health

Finally, violence against women can cause mental health problems which can worsen women's physical health problems. In the general population, depression is linked to inflammation and heart disease as described above, and depression is also associated with "premature aging,

impaired immune function, impaired wound healing, and even Alzheimer's disease" (22). Women who experience intimate partner violence not only have significantly higher rates of depression, they are also more likely to experience anxiety, posttraumatic stress disorder (PTSD), and engage in substance abuse (26, 27). An important consequence of many mental health problems is an increase in certain unhealthy coping or risk behaviors. Studies have found links between intimate partner violence and sexual risk behaviors such as low condom usage and unsafe sexual partners (5, 28), increased cigarette smoking which is a risk factor heart disease and cancer (15, 29), and increased drug and alcohol abuse which can contribute to other long-term health problems 28, (30, 31, 32). Over time, experiences of abuse can increase hostility and damage social relationships, cause sleep disturbances, and decrease immune functioning in ways that can also eventually lead to poor health (22).

Conclusion

To put it simply, intimate partner violence can have long-term health consequences for women that are both direct and indirect. The direct consequences of repeated physical, sexual, or psychological abuse are well known. These direct health impacts include the risk of death, physical injuries and resulting disabilities, and long-term gynecological problems. Emerging research suggests that traumatic brain injuries, commonly referred to as concussions, may be an important yet overlooked consequence of long-term physical abuse. Recent public debate and even Congressional hearings on sports injuries finds that repeated mild traumatic brain injuries can have life-altering consequences even with rest and proper treatment, and yet battered women often go undiagnosed and have no protections from further injury. Other research suggests that long-term sexual abuse may increase a woman's risk of developing cervical cancer.

The indirect impacts of chronic abuse on women's health are insidious, often difficult to diagnose but can lead to cumulatively worsening health in a variety of ways that research is only beginning to understand. One of the ways ongoing physical, sexual, and psychological violence can

impact women's health is by creating constant physical and emotional stress on the body. Over time, this stress overwhelms the brain and body's ability to respond appropriately, and can cause patterns of physical symptoms known as stress-related somatic syndromes. In other words, chronic abuse can literally change the survivor's brain chemistry and alter her personality, her ability to cope with pain, and the ability of her body to heal or protect itself from disease. Intimate partner violence also appears to worsen other chronic health conditions, increasing the severity of gastrointestinal disorders and heart disease. Chronic abuse also contributes to mental health problems, which over time can also stress the body, lower immune responses, and increase vulnerability to common health conditions like diabetes. In light of the growing knowledge that violence against women affects women's health in so many ways, many medical professionals and researchers now recognize that solving violence against women should be a priority for improving the health of women in our communities.

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