



Journal of Health Disparities Research and Practice
Volume 7, Special Issue 2, Winter 2014, pp. 10 - 23
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School of Community Health Sciences
University of Nevada, Las Vegas

Is Race a Factor in Disparate Health Problems Associated with Violence Against Women?

Gabriel Garcia, Department of Health Sciences University of Alaska Anchorage
Marny Rivera, Justice Center University of Alaska Anchorage

ABSTRACT

Research studies examining the health correlates of violence against women have consistently demonstrated associations between violence and poor health outcomes, but have not examined a disparate impact on racial minorities. Alaska Victimization Survey data (2010) were used to examine whether a disparate relationship between victimization and health problems exists for minority women relative to White women. The Alaska Victimization Survey (AVS) is a cross-sectional survey designed to provide baseline estimates of intimate partner and sexual violence for Alaskan women. Logistic regression was used to assess the odds of experiencing various health problems given race and exposure to violence status while holding age and education constant. This study found that victimization increased the odds of health problems for all women, but significantly more so for minority women. Based on allostatic load theory, minority women who are victims of violence may be more likely to experience poor health outcomes because of the compounding effects of life stressors on neural, endocrine, and immune systems. Policy and practice implications of the study findings suggest preventing and reducing violence against all women, and for informed physicians to screen patients for abuse histories and refer to appropriate counseling and other stress reduction resources.

Keywords: intimate partner violence; sexual violence; women's mental health; women's physical health; minorities

INTRODUCTION

In the U.S., racial minorities are at higher risk for many types of health problems compared to their White counterparts. For example, compared to Whites, Blacks have higher hypertension rates (Glover & Greenlund, 2005); American Indian/Alaska Natives are more likely to have serious psychological distress (Centers for Disease Control & Prevention, 2011); and racial minorities are more likely to experience higher average levels of daily pain (Meghani & Cho, 2009).

Additionally, racial minorities in the U.S., particularly women, experience violence at higher rates than Whites. In 2010, lifetime intimate partner violence (IPV) prevalence among

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White women was about 35% compared to 37% among Hispanic women, 44% among Black women, 46% among American Indian/Alaska Native women, and 54% among multiracial women (Black et al., 2011). In terms of rape, about 19% of White women reported they were raped in their lifetime compared to 22% among Black women, 27% among American Indian/Alaska Native women, and 34% among multiracial women (Black et al., 2011).

Previous research has shown that there is an association between experience of violence and poor health outcomes (Pico-Alfonso et al., 2006; Loxton, Schofield, Hussain, & Mishra, 2006; Vandermark & Mueller, 2008). Given that racial minorities are disparately affected by health problems and violence, the question remains whether race is a factor in terms of the health problems associated with violence against women. This article examines the relationship between violent victimization and health problems among minority and non-minority women in Alaska.

Research on Violence and Health

Research studies examining the health correlates of violence are relatively extensive, though they have employed different methodologies and have been conducted with different goals. These studies have used a variety of data collection methods (Campbell & Soeken, 1999; Dennis et al., 2009; Hensing & Alexanderson, 2000; Krantz & Ostergren, 2000; Loxton, Schofield, Hussain, & Mishra, 2006; Pico-Alfonso et al., 2006; Plichta & Falik, 2001; Sutherland, Bybee, & Sullivan, 2002; Thomas, Joshi, Wittenberg, & McCloskey, 2008), including different sample populations (community samples, health care populations, and victim or social service recipients), and sample sizes (from 40-14,000), and were conducted both inside and outside of the United States (Loxton, Schofield, Hussain, & Mishra, 2006; Hensing & Alexanderson, 2000; Krantz & Ostergren, 2000; Pico-Alfonso et al., 2006; Vives-Cases et al., 2011). The findings are consistent—experiencing or being exposed to violence is associated with the incidence of health problems.

The poor health outcomes examined as correlates of violence have included assessments of physical and/or mental health. The vast majority of studies included both physical and mental health outcomes though a few studies focused exclusively on mental health problems (Pico-Alfonso et al., 2006; Vandermark & Mueller, 2008) or physical health problems (Loxton, Schofield, Hussain, & Mishra, 2006). Studies examining both physical and mental health problems may make the greatest contribution to understanding the relationship between violent victimization and health. This is due to the emotional and mental impacts of suffering from violence that can fuel physical health problems beyond injuries that resulted directly from the violence. A common mental health problem studied included depression, which was assessed or measured in a variety of ways including the use of Beck's Depression Inventory (BDI) or the Center of Epidemiological Studies-Depression (CES-D) scale where depressive symptoms are rated as minor or severe (Bonomi et al., 2006; Campbell & Soeken, 1999; Dennis et al., 2009; Eshelman & Levendosky, 2012). Other indications of mental health problems, such as depression or anxiety, came from other inventories, diagnosis by a doctor of a depressive or anxiety disorder (Pico-Alfonso et al., 2006; Plichta & Falik, 2001), or prescription for a depressive or anxiety disorder (Plichta & Falik, 2001; Vives-Cases et al., 2011). Stress as measured by the number of stressful life events or assessed using the Daily Hassles Scale, or the existence of PTSD, was another frequently studied mental health condition (Campbell & Soeken, 1999; Dennis et al., 2009; Sutherland, Bybee, & Sullivan, 2002). Other mental health conditions and assessments of them consisted of assessments of hostility or coherence using the Sense of

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Coherence assessment (Dennis et al., 2009; Hensing & Alexanderson, 2000). More general mental health assessments included reporting the extent of psychological distress or the number of days in the past month on which respondents experienced poor mental health (Plichta & Falik, 2001; Vandermark & Mueller, 2008).

Most of the research studies used measures of physical health in addition to mental health as outcomes of violence. Researchers commonly assessed physical health by having participants respond to a checklist of injuries or physical symptoms, including pain. Some of the injuries and symptoms were intentionally measured because they have previously been associated with domestic violence, including cuts, scrapes or bruises, black or swollen eye, joint pain, low back pain, muscular tension, headache, and irritability (Eshelman & Levendosky, 2012; Krantz & Ostergren, 2000). Other studies asked participants to report on the number or type of physical conditions or diagnoses of chronic conditions such as diabetes, heart disease, hypertension, and asthma, as well as those associated with intimate partner violence including high blood pressure, choking sensations, and pelvic pain (Loxton, Schofield, Hussain, & Mishra, 2006; Sutherland, Bybee, & Sullivan, 2002). As with data collected on mental health, some measures of physical health simply asked participants to rate their overall physical health on a scale from poor to excellent. The reporting period varied from study to study and included general references such as recent symptoms or current diagnosis (Loxton, Schofield, Hussain, & Mishra, 2006; Plichta & Falik, 2001) covering specific time periods ranging from the past month (Bonomi et al., 2006; Vandermark & Mueller, 2008) to the past six months (Sutherland, Bybee, & Sullivan, 2002) or nine months (Woods, Hall, Campbell, & Angott, 2008)

McEwen's (1998, 2000) allostatic load theory is relevant to understanding the connection between violence and health. According to this theory, individuals who are constantly exposed to stress in their life course eventually become overexposed to neural, endocrine, and immune stress mediators. These stress mediators can then adversely affect various organ systems, leading to diseases and poor health outcomes. There are empirical data to support this theory.

The violent victimizations studied as predictors of various mental and physical health outcomes have included both child and adult abuse or violence. The studies that included measures of child abuse have found that people subjected to violence earlier in their lives are more likely to suffer from additional violence or poor health outcomes than those not exposed to childhood violence. Some studies of health effects from violence reported that violence in childhood correlated with adult victimization, but did not examine the impact of childhood victimization on health outcomes (Bonomi et al., 2006; Pico-Alfonso et al., 2006; Plichta & Falik, 2001). Other studies found significant associations between experiencing violence as a child and suffering from poor mental health outcomes including depression, anxiety, PTSD, or a high number of physical health symptoms. These investigations did not examine the additive effect of childhood and adult violence on health outcomes (Dennis et al., 2009; Krantz & Ostergren, 2000; Plichta & Falik, 2001). Of most interest to the current study is research that examined the additive impact of childhood and adult violence on health and found a significant correlation between the total number of forcible sexual experiences (whether as a child or as an adult) and more severe levels of depression (Campbell & Soeken, 1999).

Other studies have found that the more severe the violence, the more frequent the exposures to violence, and the experience of multiple forms of violence or trauma (such as intimate partner violence and sexual assault or rape outside of an intimate relationship), or the experience of violence over a longer duration are all associated with a larger number of health

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problems or a poorer health rating. Vives-Cases et al. (2011) and Woods, Hall, Campbell, & Angott (2008) found more severe intimate partner violence is associated with more severe physical and mental health consequences. Sutherland, Bybee, & Sullivan (2002) reported that greater average frequency of abuse was associated with a larger average number of injuries, as well as higher stress ratings. Likewise, Eshelman & Levendosky (2012) found women who reported multiple forms of IPV--psychological, physical, and sexual abuse--suffered from a larger number of depressive symptoms compared to women who experienced only psychological and physical abuse *or* only physical abuse. Experiencing different types of violence or abuse can result in more negative health outcomes. Finally, Bonomi et al. (2006) indicated that women who suffered a longer duration of IPV (more than 10 years) had the worst health outcomes compared to women who were never abused. Available research studies show quite consistently an additive or compounding effect of violence or abuse suffered by women on mental and physical health outcomes. These research findings suggest a linear relationship where the cumulative, additive, or compounding effect of stress resulting from violence has an incrementally negative impact on physical and mental health. If the stress of violence and trauma has a compounding effect on health, it is likely that other stressors, such as those associated with being a racial minority, have a similar effect.

Gaps in Violence-Health Research

Although researchers using a variety of study designs and measurement methods have consistently found relationships between exposure to, or experience of violence, abuse, or trauma and resulting health problems, few studies have examined or found a disparate impact on racial minorities. Several studies reported frequencies of minority survey participants, but did not delve any further into analyses involving racial group status (examples include Bonomi et al., 2006; Dennis et al., 2009; Eshelman & Levendosky, 2012). Campbell & Soeken, (1999) found that Black women in their sample were more likely to experience sexual assault in their interpersonal relationships than other women in the sample. However, the researchers did not examine health outcomes associated with violence differentially for minorities versus others. One study reported finding no significant difference in terms of health problems between minority group members and Caucasian research participants, but did not report on the frequency of violence experienced by members of different racial groups (Vandermark & Mueller, 2008). Other studies, particularly those conducted outside of the United States did not measure or report on race, perhaps because of less racial diversity in those countries (examples include Loxton, Schofield, Hussain, & Mishra, 2006; Pico-Alfonso et al., 2006; Vives-Cases et al., 2011).

Negative situations and/or conditions experienced by racial minorities may compound the stress of being a victim of violence. Studies have shown that racial minorities are more likely to live in poor neighborhood conditions (Williams & Collins, 2001), experience discrimination (Pascoe & Richman, 2009; Gee, 2002), lack access to health care (Copeland, 2005), and experience acculturative stress, especially among immigrants (Tran, Fitzpatric, Berg, Wright, 1996). These factors, in turn, have been shown to contribute to the disparities in health conditions and outcomes among minorities, such as poor overall health (Williams & Collins, 2001), poor physical and mental health (Gee 2002; Tran et al., 1996), and increased morbidity and mortality (Copeland, 2005). Additionally, these factors have also been shown to correlate with increased perceived stress and mental distress among minorities (Santiago, Wadsworth & Stump, 2011; Sellers, Caldwell, Schmeelk-Cone & Zimmerman, 2003; Oh, Koeske, Sales, 2002). Given this situation, based on allostatic load theory, minorities who are victims of

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violence would be more likely to experience poor health outcomes than their White counterparts due to the compounding stress and poor health conditions minorities already experience. Using data from the Alaska Victimization Survey (AVS), this study explores whether adult female minority victims of violence experience comparatively worse health outcomes than Caucasian victims of violence.

METHODS

Study Design, Data Collection, and Sampling

The AVS is a cross-sectional survey, designed to provide a baseline of lifetime and past year intimate partner and sexual violence estimates for adult Alaskan women. The survey is modeled after the National Intimate Partner and Sexual Violence Surveillance System conducted by the Centers for Disease Control in partnership with the National Institute of Justice and Department of Defense (Black et al., 2011). The AVS is a statewide telephone survey of women in Alaska that uses random digit dialing and a dual sampling frame of land and cell phone lines. Respondents were offered a monetary incentive for their participation in the survey. Survey procedures were designed to maximize respondent safety and confidentiality and were approved by the investigators' Institutional Review Board. For this study, the resulting sample included 871 Alaskan women who were surveyed in May or June 2010.

Survey Questionnaire

The survey included behaviorally specific questions about violence in the form of stalking, sexual violence (including forcible sexual assault and alcohol or drug involved sexual assault), and intimate partner violence (physical violence and threats), as well as psychological aggression, coercive control, and entrapment by a romantic or sexual partner. Respondents were asked to report if they had experienced the various forms of violence in their lifetime and in the past year. The survey also included questions about respondents' health problems. In the health section, respondents were asked whether a medical professional had told them they had asthma, irritable bowel syndrome, diabetes, or high blood pressure. Respondents were also asked whether they experienced frequent headaches, chronic pain, or had difficulty sleeping. They were also asked to rate their general physical health and mental health on a scale from poor to very good. Survey items also included demographic characteristics such as age, race, education, and income.

Dependent Variables

Not all of the health variables in the survey were used as dependent variables. Only health variables that have been shown to be associated with violence in previous literature were assessed. These included whether respondents have fair/poor physical health, fair/poor mental health, high blood pressure, frequent headaches, irritable bowel syndrome, and chronic pain.

Independent Variables

In this study, a composite lifetime violence variable was created. A respondent who indicated she had experienced any of the specific behaviors that constituted physical intimate partner violence (excluding threats) or sexual violence (not limited to spouse or partner) were coded as yes and all others were coded as no.

The race variable originally had seven categories: Whites, Blacks, Asians, Native Hawaiians or Pacific Islanders, American Indians, Alaska Natives, and Multiracial. However, due to the small sample size of individual minority groups (i.e., less than 100 respondents), they were aggregated into two groups—American Indians/Alaska Natives and other minorities (see Table 1).

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To assess the relationship of race and violence with a given health condition, this study's independent variable combined the composite lifetime violence variable and race variable to a single "race-violence" variable with four categories: White women who have not experienced violence; White women who have experienced violence; minority women who have not experienced violence; and minority women who have experienced violence. American Indian/Alaska Native women and other minority women were eventually aggregated into one minority category because health conditions experienced by these groups were not significantly different (see Table 2).

Control Variables

This study had two control variables: age and education. Age, which was originally a continuous variable, was dichotomized based on the mean into less than 45 years, and greater than or equal to 45 years. Likewise, education, which originally had eight categories, was dichotomized into less than or equal to high school, and greater than high school education.

Analysis

The data were analyzed using SPSS 19.0. Univariate descriptive statistics were used to show the prevalence of lifetime victimization, individual health outcomes, and respondent characteristics. Bivariate analysis was conducted to assess whether there was a significant difference in health conditions between different racial groups. Logistic regression analyses were run to assess the odds of experiencing each of the various health conditions, given race-violence status and holding age and education constant. Finally, the numbers of health problems out of the five items reported by White women and minority women who have experienced violence were compared. The number of health problems was dichotomized into 1) having less than three, and 2) having three to five health problems. Any significant difference in the proportion between the two groups was assessed using a chi-square test.

All of the variables in the study had virtually no missing data (less than 0.23%), except for the race variable which had less than 2% missing. Missing data were handled using listwise deletion.

RESULTS

Sample Characteristics

Approximately 75% of the survey respondents are White and the rest are racial minorities. Most of the participants had more than a high school degree or equivalent, were aged 45 years and above, and had experienced some form of violence in their lifetime. About one in ten women reported experiencing any violence in the past year. The three most commonly reported health conditions or outcomes among survey participants were high blood pressure, chronic pain, and frequent headaches.

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Table 1. Alaska Victimization Survey (2010) Demographic Characteristics, Reported Violence, and Health Conditions, N = 871

Demographic Characteristics	Percent
Race	
White women	75.9
Minority women	24.1
Alaska Native/American Indian women	12.2
Other Minority women	11.9
Education	
≤ High School	30.6
> High School	69.4
Age¹	
< 45 years old	44.5
≥ 45 years old	55.5
Violence	
Lifetime violence (sexual assault, physical violence)	55.9
Any violence in the past 12 months	9.0
Health Conditions	
High Blood Pressure	24.1
Fair or Poor Physical Health	16.0
Fair or Poor Mental Health	9.0
Irritable Bowel Syndrome	7.8
Frequent Headaches	18.8
Chronic Pain	21.9

¹Mean Age = 46.1±16.4; Median Age = 47.0

Violence and Health Conditions by Race

Compared to White women, a significantly greater proportion of minority women had experienced some type of violence in their lifetime. Additionally, a significantly higher number of minority women reported having fair or poor mental health compared to White women. When Alaska Native/American Indian women were compared with other minority women, there were no significant differences in reported lifetime violence and health conditions.

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Table 2. AVS (2010) Reported Violence and Health Conditions by Race of Women

Violence & Health Conditions	White women (N = 649) Percent	Minority women (N = 206) Percent	AK Native/ Am Indian women (N = 104) Percent	Other Minority women (N = 102) Percent
Any Violence (Sexual Assault, Physical Violence)	53.0	65.0**	60.8	69.4
High Blood Pressure	22.8	29.3	28.8	29.7
Fair or Poor Physical Health	14.7	20.5	17.5	23.5
Fair or Poor Mental Health*	7.4	12.6*	9.6	15.7
Irritable Bowel Syndrome	8.5	5.8	5.8	5.9
Frequent Headaches	17.6	22.3	20.2	24.5
Chronic Pain	20.3	26.7	23.1	30.4

*P<0.05, **P<0.01

Correlates of Poor Health Conditions Considering Race and Experience with Violence

Survey participants were categorized into four groups—(1) White women who have not experienced violence (N=297); (2) White women who have experienced violence (N=335); (3) minority women who have not experienced violence (N=70); and (4) minority women who have experienced violence (N=130). Then, their odds of experiencing poor health conditions were assessed, controlling for education and age. With the first group as the referent group, minority women who had experienced violence had greater odds of having high blood pressure (OR=1.76), fair/poor physical health (OR=3.15), fair/poor mental health (OR=5.14), frequent headaches (OR=2.22), and chronic pain (OR=4.12). Although White women who have experienced violence also have higher odds of experiencing these poor health conditions (except high blood pressure), the odds of experiencing each of these conditions, except irritable bowel syndrome, were higher among minority women who have experienced violence. All of the logistic regression results had a good fit, with the Hosmer and Lemeshow test having a p-value greater than 0.5.

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Table 3. Odds Ratio for Health Conditions for White Women versus Minority Women Experiencing Violence, Controlling for Education and Age

	High Blood Pressure	Fair/ Physical Health	Poor Mental Health	Fair/ Mental Health	Poor Irritable Bowel Syndrome	Frequent Headaches	Chronic Pain
White women who have not experienced violence	Ref	Ref	Ref	Ref	Ref	Ref	Ref
White women who have experienced violence	0.97	1.87**	2.40*	0.68	1.93**	2.53**	
Minority women who have not experienced violence	2.05*	1.09	0.33	1.08	1.35	0.83	
Minority women who have experienced violence	1.76*	3.15**	5.14**	0.36	2.22**	4.12**	

*P<0.05, **P<0.01

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Number of Poor Health Conditions among Whites and Minorities

White women and minority women who have experienced violence were compared in terms of the number of health problems they reported. A significantly greater proportion of minority women reported having three or more health problems compared to White women (36.5% minorities vs. 23.3% Whites, $X^2 = 4.61$, $P < 0.05$).

DISCUSSION

The findings from this study are consistent with those in the related literature. This study suggests that women who have experienced violent victimization are likely to experience poor mental health outcomes as a consequence of the abuse and this is in line with what other researchers have found (Dennis et al., 2009; Eshelman & Levendosky, 2012; Hensing & Alexanderson, 2000; Pico-Alfonso et al., 2006; Plichta & Falik, 2001; Vandermark & Mueller, 2008; Vives-Cases et al., 2011). Additionally, findings from this study are also consistent with other researchers who have found that there are increased odds of having poor physical health among women who are victims of violence (Bonomi et al., 2006; Campbell & Soeken, 1999; Hensing & Alexanderson, 2000; Krantz & Ostergren, 2000; Plichta & Falik, 2001; Vives-Cases et al., 2011). Finally, this study found that women who are victims of violence are more likely to report having frequent headaches and chronic pain. These types of health problems are consistent with what Loxton et al. (2006) and Woods et al. (2008) have found in their sample of victimized women.

A gap in violence research is whether race is a factor in terms of the disparate health problems associated with violent victimization of women. Findings from this study suggest that, indeed, race is a factor, regardless of age and education status. Minority women who are victims of violence had greater odds of reporting high blood pressure, fair/poor physical and mental health, frequent headaches, and chronic pain compared to White women who are also victims of violence. Moreover, minority women who are victims of violence are more likely to have health problems when compared to their White counterparts. Based on allostatic load theory, this could be due to the physiological manifestations of the additional stress minority women experience, which may be uncommon to White women. Unfortunately, this study did not identify the unique factors minority women experience that add to the stress in their lives. However, based on previous literature, it is possible that minority women in the study sample experienced some of the common race-specific factors such as discrimination, living in poor neighborhood conditions, acculturation, and lack of access to appropriate health or social services (Malley-Morrison & Hines, 2007).

While this study makes an important contribution to violence and health research, it has several limitations. First, given its use of a cross-sectional study design, the significant associations found do not necessarily infer causality. On the other hand, the study findings are consistent with theory, giving strength to the validity of our results. Second, the proportion of minority women in the sample was smaller than their proportion in the population and all minority groups were aggregated due to their small sample size. This raises questions about the ability to generalize results to all minority women in the population. There are also important and unique ethnic and cultural differences within and among racial groups that can influence their lifestyle, behaviors, and ways of addressing violence that this study did not take into consideration. For example, studies have shown that cultures with strong patriarchal, male-dominated family structure, such as Latin American, Black, and American Indian families, were

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more tolerant of family violence (Rasche, 1988). This study also did not differentiate among minority groups who are foreign-born or not, U.S. citizen or not, or whether they speak English well or not, due to small the sample size within each minority group. These unique statuses have significant implications in terms of accessing health care or finding support when violence is encountered. Third, this study did not identify unique stressors that can potentially affect the health of minority women who have experienced violence. This would have given depth to the study findings, and would have been helpful in terms of developing specific prevention and treatment strategies for minority women who are victims of violence. Fourth, study results focused on women who reported being victims of violence in their lifetime rather than in the past year, because the number of past year victims was too small to detect significant associations.

Despite these limitations, this study is perhaps one of the first to investigate the effect of race on the health conditions of women who have experienced violence in their lives. This study is exploratory, and there are several implications in terms of future research. First, future research should study unique differences in violence and health outcomes, and factors influencing these within and among racial minority groups. Different racial groups may have different needs, and therefore require distinctive strategies when addressing violence and violence-related health outcomes. Researchers should consider oversampling racial/ethnic minority groups to better assess inter and intra-race/ethnic differences in violence and health outcomes. Second, future surveys on violence should consider adding questions on stress and indicators of stress, as well as questions related to the unique experience of minorities, such as discrimination, access to health care, neighborhood conditions, ethnic identity, and acculturation. Such types of questions can help identify factors and stressors unique to racial minorities, and help researchers and health practitioners find better ways to prevent and treat stress related to violence and health. Third, this study did not use continuous measures for violence (i.e., frequency of violence). Thus, it was not able to determine the additive effects of violence on specific health outcomes. Future studies should consider quantifying the level and frequency of violence. Moreover, it is important to conduct qualitative research to describe and put into context the type of violence experienced by individuals and how it affects their health. Finally, consideration should be given to conducting violence research using a study design that has stronger internal validity than a cross-sectional study design. Following a comparable cohort of minority women and White women who have experienced violence, prospectively, then looking at their health statuses over time can provide a more valid finding in terms of connecting race-specific stress and disparate health outcomes.

CONCLUSION

This study has important implications in terms of policy and practice. Study findings suggest that the most effective way to reduce poor health outcomes associated with violence against women is to reduce or prevent this violence in the first place. Because this and other studies have found that women who experience violence are more likely to suffer poor health outcomes, there is a need for prevention and reduction of violence against all women that is racially and culturally sensitive. The most negative health outcomes associated with minority victims of violence will improve with universal prevention and reduction of violence against all women. The focus of these efforts should center on the criminal justice system identifying and holding accountable offenders who commit violence against women. However, prevention efforts can also take place in schools and communities, with the goal of educating young people

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about healthy relationships and changing norms so that violence against women is deemed unacceptable.

Another implication of the research is the need to reduce stress and anxiety in women who are victims of violence as soon as possible, in an attempt to lessen the incidence and severity of poor health outcomes associated with violence. Crisis shelters and victims advocates can help victims reduce stress and anxiety associated with violent victimization by providing or referring for mental health assessments and counseling, as well as strategies such as relaxation and meditation that are associated with reduced stress and anxiety. Finally, mental health and particularly physical health care professionals, including primary providers and those with gynecological and obstetric specialties who work extensively with female patients, should be educated about the poor health outcomes associated with female victims of violence and should provide brief universal screening of female patients for multiple forms of trauma and violence against women. As part of interdisciplinary teams and a comprehensive response to trauma and violence against women, physicians should be trained to counsel, educate, and refer female victims of trauma and violence to community services for victims and to providers skilled in anxiety and stress reduction care. Health care providers should be given information and training designed to help them connect female victims of violence with a comprehensive array of services that includes legal advocacy and safety planning, as well as trauma-informed physical and mental health care and support.

ACKNOWLEDGEMENTS

We sincerely thank the women who invested time and effort to participate in the Alaska Victimization Survey. They re-lived horrendous experiences, experiences that no one should have to be subjected to, to help the rest of us understand the extent of intimate partner and sexual violence in Alaska. The authors would like to acknowledge Dr. André Rosay and Ms. Barbara Armstrong for reviewing our work and the Council on Domestic Violence and Sexual Assault for their generous support of the Alaska Victimization Survey.

REFERENCES

- Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., Chen, J., & Stevens, M. R. (2011). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- Bonomi, A. E., Thompson, R. S., Anderson, M., Reid, R. J., Carrell, D., Dimer, J. A., & Rivara, F. P. (2006). Intimate partner violence and women's physical, mental, and social functioning. *American Journal of Preventive Medicine*, 30(6), 458-466. doi: 10.1016/j.amepre.2006.01.015
- Campbell, J. C., & Soeken, K. L. (1999). Forced sex and intimate partner violence: Effects on women's risk and women's health. *Violence Against Women*, 5(9), 1017-1035. doi: 10.1177/1077801299005009003
- Centers for Disease Control and Prevention. (2011). Health United States, 2011, Table 59. Retrieved from <http://www.cdc.gov/nchs/data/hus/hus11.pdf>.
- Copeland, V. C. (2005). African Americans: Disparities in health care access and utilization. *Health & Social Work*, 30(3), 265-270.
- Dennis, M. F., Flood, A. M., Reynolds, V., Araujo, G., Clancy, C. P., Barefoot, J. C., & Beckham, J. C. (2009). Evaluation of lifetime trauma exposure and physical health in
Journal of Health Disparities Research and Practice, Volume 7, Special Issue 2
Women of Color Sexual Health Across the Lifespan, Winter 2014

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- women with Posttraumatic Stress Disorder or Major Depressive Disorder. *Violence Against Women*, 15(5), 618-627. doi: 10.1177/1077801209331410
- Eshelman, L., & Levendosky, A. A. (2012). Dating violence: Mental health consequences based on type of abuse. *Violence and Victims*, 27(2), 215-228. Doi: 10.1891/0886-6708.27.2.215
- Glover, M. J., & Greenlund, K. J. (2005). Racial/ethnic disparities in prevalence, treatment, and control of hypertension—United States, 1999 – 2002. *MMWR*, 54(1), 7-9.
- Gee, G. C. (2002). A multilevel analysis of the relationship between institutional and individual racial discrimination and health status. *American Journal of Public Health*, 97(5), 933-940.
- Hensing, G., & Alexanderson, K. (2000). The relation of adult experience of domestic harassment, violence, and sexual abuse to health and sickness absence. *International Journal of Behavioral Medicine*, 7(1), 1-18.
- Krantz, G., & Ostergren, P. (2000). The association between violence victimization and common symptoms in Swedish women. *Journal of Epidemiology and Community Health*, 54(11), 815-821. doi: 10.1136/jech.54.11.815
- Loxton, D., Schofield, M., Hussain, R., & Mishra, G. (2006). History of domestic violence and physical health in midlife. *Violence Against Women*, 12(8), 715-731. doi:10.1177/1077801206291483
- Malley-Morrison, K., & Hines, D. A. (2007). Attending to the role of race/ethnicity in family violence research. *Journal of Interpersonal Violence*, 22, 943-972.
- McEwen, B. S. (1998). Neuroimmunomodulation: Molecular aspects, integrative systems, and clinical advances. *Annals of the New York Academy of Sciences*, 840, 33-44.
- McEwen, B. S. (2000). Allostasis and allostatic load: Implications for neuropsychopharmacology. *Neuropsychopharmacology*, 22(2), 108-124.
- Meghani, S. H., & Cho, E. (2009). Self-reported pain and utilization of pain treatment between minorities and nonminorities in the United States. *Public Health Nursing*, 26(4), 307-316. doi: 10.1111/j.1525-1446.2009.00785.x
- Oh, Y., Koeske, G. F., & Sales, E. (2002). Acculturation, stress, and depressive symptoms among Korean immigrants in the United States. *Social Psychology*, 142(4), 511-526. doi: 10.1080/00224540209603915
- Pascoe, E. A., & Richman, L. S. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin*, 135(4), 531-554. doi: 10.1037/a0016059
- Pico-Alfonso, M. A., Garcia-Linares, M. I., Celda-Navarro, N., Blasco-Ros, C., Echeburua, E., & Martinez, M. (2006). The impact of physical, psychological, and sexual intimate male partner violence on women's mental health: Depressive symptoms, posttraumatic stress disorder, state anxiety, and suicide. *Journal of Women's Health*, 15(5), 599-611. doi: 10.1089/jwh.2006.15.599
- Plichta, S. B., & Falik, M. (2001). Prevalence of violence and its implications for women's health. *Women's Health Issues*, 11(3), 244-258. doi: 10.1016/S1049-3867(01)00085-8
- Rasche, C. E. (1988). Minority women and domestic violence: The unique dilemmas of battered women of color. *Journal of Contemporary Criminal Justice*, 4, 150-171. doi: 10.1177/104398628800400304
- Santiago, C. D., Wadsworth, M. E., & Stump, J. (2011). Socioeconomic status, neighborhood disadvantage, and poverty-related stress: Prospective effects on psychological syndromes among diverse low-income families. *Journal of Economic Psychology*, 32(2), 218-230.

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- Sellers, R. M., Caldwell, C. H., Schmeelk-Cone, K. H., & Zimmerman, M. A. (2003). Racial identity, racial discrimination, perceived stress, and psychological distress among African American Young Adults. *Journal of Health and Social Behavior*, 44(3), 302-317.
- Sutherland, C. A., Bybee, D. I., & Sullivan, C. M. (2002). Beyond bruises and broken bones: The joint effects of stress and injuries on battered women's health. *American Journal of Community Psychology*, 30(5), 609-636. doi: 0091-0562/02/1000-0609/0
- Thomas, K. A., Joshi, M., Wittenberg, E., & McCloskey, L. A. (2008). Intersections of harm and health: A qualitative study of intimate partner violence in women's lives. *Violence Against Women*, 14(11), 1252-1273. doi: 10.1177/1077801208324529
- Tran, T. V., Fitzpatric, T., Berg, W. R., and Wright, R, Jr. (1996). Acculturation, health, stress, and psychological distress among elderly Hispanics. *Journal of Cross-Cultural Gerontology*, 11(2), 149-165.
- Vandermark, L., & Mueller, M. (2008). Mental health after sexual violence: The role of behavioral and demographic risk factors. *Nursing Research*, 57(8), 175-181. doi: 10.1097/01.NNR.0000319498.4499.53
- Vives-Cases, C., Torrubiano-Dominguez, J., Escriba-Aguir, V. A., Ruiz-Perez, I., Montero-Pinar, M. I., & Gil-Gonzalez, D. (2011). Social determinants of health effects of low and high severity intimate partner violence. *Annals of Epidemiology*, 21(12), 907-913. doi: 10.1016/j.annepidem.2011.02.003
- Williams, D. R., & Collins, C. (2001). Racial residential segregation: A fundamental cause of racial disparities in health. *Public Health Reports*, 116, 404-416.
- Woods, S. J., Hall, R. J., Campbell, J. C., & Angott, D. M. (2008). Physical health and Posttraumatic Stress Disorder symptoms in women experiencing intimate partner violence. *Journal of Midwifery and Women's Health*, 53(6), 538-546. doi: 10.1016/j.mwh.2008.07.004