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Intimate Partner Violence and Its Association With Physical and Mental Health Symptoms Among Older Women in Germany

Heidi Stöckl, PhD[1] and Bridget Penhale, MSc[2]

Abstract

Intimate partner violence is a commonly acknowledged health care issue. While numerous studies established the health implications of physical and/or sexual intimate partner violence among women of reproductive age, the evidence is scarce for older women and for other forms of intimate partner violence. This study, therefore, investigates the prevalence of intimate partner violence in its different forms and its association with physical and mental health symptoms of older women, using women of reproductive age as a reference group. This study is a cross-sectional study, utilizing data from a national representative survey of 10,264 German women aged 16 to 86 years. Rates of physical and sexual intimate partner violence in the last year decreased from 8% to 3% and 1% among women aged 16 to 49 years, 50 to 65 years, and 66 to 86 years, respectively. The prevalence of emotional and economic abuse and controlling behavior by partners remained nearly the same. All forms of intimate partner violence had significant associations with women's health symptoms, such as gastrointestinal, psychosomatic

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and psychological symptoms, and pelvic problems. Controlling behavior was most consistently associated with most health symptoms. Health and care professionals who screen women for intimate partner violence should, therefore, consider incorporating questions about controlling behavior as well, because this form of violence is not only frequent but also has multiple health outcomes among women across all ages.

Keywords
domestic violence, elder abuse, mental health and violence, battered women, anything related to domestic violence

Introduction

Intimate partner violence, which encompasses physical, sexual, and increasingly psychological and economic violence as well as controlling behavior by an intimate partner, is a commonly acknowledged health care issue (García-Moreno & Stöckl, 2009). Gold standard methods to measure intimate partner violence are to ask respondents direct questions about their experience of behaviorally specific acts of violence by a current or former partner, ranging from whether they have been hit or slapped to strangled or threatened with a weapon (Devries et al., 2013). Agreements on definitions and measurement standards are still missing for other forms of abuse—such as emotional abuse, which includes being humiliated, insulted, intimidated, or threatened, economic abuse, and controlling behaviors by a partner, which includes not being allowed to see friends or family—despite the acknowledgement that they also impact the health of individuals (Hegarty et al., 2013; Jewkes, 2010).

The lifetime prevalence of physical and sexual violence by intimate partners worldwide was found to range from 15% to 71%, and the last year prevalence ranged between 4% and 54% (Garcia-Moreno, Heise, Jansen, Ellsberg, & Watts, 2005). Studies in Europe have found prevalence rates between 20% and 27%, and last year prevalence rates between 6% and 10% (Hagemann-White, 2001; Nerøien & Schei, 2008; Papadakaki, Tzamalouka, Chatzifotiou, & Chliaoutakis, 2009; Stöckl, Heise, & Watts, 2011; Zorrilla et al., 2010). There is an assumption that the prevalence of physical and sexual intimate partner violence decreases with women's increased age (Band-Winterstein & Eisikovits, 2009). This assumption is mainly based on a limited number of studies investigating the prevalence of physical or sexual intimate partner violence among older women and the general criminological theory that

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levels of criminal behavior decrease with age (Sampson & Laub, 1995). Most studies investigating intimate partner violence among older women that also examine the prevalence and impact of emotional or economic abuse, stalking, and controlling behavior have found that these forms of violence are argued to be more frequent among older women (Weeks & Leblanc, 2011; Zink, Jacobson, Regan, Fisher, & Pabst, 2006) than those forms that are perhaps perceived as constituting more "traditional" forms of intimate partner violence. It has also been contended that these forms of violence are perceived as more serious and harmful with increasing age, as their cumulative effect over the years decreases women's levels of tolerance of and capacity to cope with them (Band-Winterstein & Eisikovits, 2009).

There is clear evidence of the short- and long-term health effects of intimate partner violence on women, including physical health outcomes, such as having difficulty walking, difficulty with daily activities, pain, memory loss, dizziness, and vaginal discharge in the previous 4 weeks, and mental health outcomes, such as significantly more emotional distress, suicidal thoughts, and suicidal attempts than non-abused women (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008; Hegarty et al., 2013; Howard, Trevillion, & Agnew-Davies, 2010; Lacey, McPherson, Samuel, Sears, & Head, 2013). Evidence from the field of psychoneuroimmunology highlights the connection between stressful disturbances and social stress created by intimate partner violence and physiological consequences, which can impair the physical health of women (Woods, 2005). Studies supporting this claim found associations between intimate partner violence and chronic pain (Wuest et al., 2008), immune functioning and control (Constantino, Sekula, Rabin, & Stone, 2000; Garcia-Linares, Sanchez-Lorente, Coe, & Martinez, 2004), and inflammation (Newton et al., 2011). Both direct and indirect pathways can link intimate partner violence with these adverse health outcomes, directly through injuries resulting from the violent acts, and indirectly through increased stress, reduced mobility, and limited access to resources and health care. Sustained and acute elevated stress levels, a known immediate and long-term consequence of intimate partner violence, for example, have been linked to cardiovascular disease, hypertension, gastrointestinal disorders, and chronic pain (Beydoun, Beydoun, Kaufman, Lo, & Zonderman, 2012; Miller, 1998). Another indirect pathway is that some women also try to manage the stress and trauma caused by intimate partner violence through the use of alcohol, prescription medication, tobacco, or other drugs (Smith, Homish, Leonard, & Cornelius, 2012; Stene, Jacobsen, Dyb, Tverdal, & Schei, 2013).

Although the evidence on the effects of intimate partner violence among older women is still limited, some general observations can be drawn. As among women below the age of 50 years, the health impacts of

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intimate partner violence among older women are also both physical and psychological (Fisher, Zink, & Regan, 2011; Mouton, 2003). They include trauma-related injuries and physical conditions, such as gastrointestinal disorders, genito-urinary, and musculo-skeletal disorders (McGarry, Simpson, & Hinchliff Smith, 2011). For example, Mouton's (2003) study of 1,245 community dwelling women aged 50 to 79 years found increased rates of poorer mental health among older women who experienced intimate partner violence. Likewise, the five-country European study on Abuse and Violence against Older Women (AVOW) undertaken through the European Union (EU) Daphne Program found a significant association between abuse, violence, and poor mental health for older women, although this study was not exclusively about intimate partner violence in later life (Luoma et al., 2011). In addition, older women are affected by intimate partner homicide to a greater degree than older men, as a recent study of intimate partner homicides among couples aged 65 years or older in Canada found (Bourget, Gagné, & Whitehurst, 2010).

Despite the acknowledgement that intimate partner violence, especially emotional and economic abuse or controlling behaviors, remain a problem for many older women (McGarry et al., 2011; Weeks & Leblanc, 2011), few studies have investigated its prevalence and its association with physical and mental health difficulties among women above the age of 49 years using national representative survey data (Nerøien & Schei, 2008; Piispa, 2004; Zorrilla et al., 2010). While there is consensus that older women who report intimate partner violence also have poorer physical and psychological health, it remains unclear if the violence affects them more or less. On one hand, it is assumed that the impact that intimate partner violence has on women's health decreases with women's increased age, as levels of physical and sexual violence decrease and women might have devised strategies to deal with the negative impact of violence over time (McGarry et al., 2011). On the other hand, it is argued that the health of women experiencing intimate partner violence might be worse for older women as they may need to deal with the cumulative effects of long-term intimate partner violence (Penhale & Porritt, 2010), and because they are more used to internalizing the problem (Fisher et al., 2011; Romito, Turan, & De Marchi, 2005). Furthermore, older women appear to be less likely to seek outside help to deal with intimate partner violence. They are also less likely to end the violence by leaving their abusive partner compared with younger women, due to economic dependencies and emotional attachment to the place they may have lived in for their whole lives and where they have sustained social networks (Nägele, Böhm, Görgen, & Töth, 2010).

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This article seeks to build on the acknowledgement of the existence of multiple forms of abuse in old age. It addresses the lack of national representative data on violence against older women by using the German national representative survey data on violence against women to explore the prevalence of different forms of intimate partner violence and their association with women's health symptoms, predominantly among women aged 50 to 65 years, and women aged 66 to 86 years.

Methods

Survey

The data employed in this analysis were derived from the national representative study "Health, Well-Being and Personal Safety of Women in Germany." The Federal Ministry for Family Affairs, Senior Citizens, Women and Youth commissioned this cross-sectional survey, which was conducted by the Centre for Women's Studies at the University of Bielefeld in cooperation with the Institute for Applied Social Sciences in 2003 (Müller & Schröttle, 2004).

For this study, women were randomly selected from registration lists from 250 randomly chosen communities throughout Germany. All selected women received a personalized letter about the study, which contained information on the study, details of the randomized selection process, data privacy laws, and the voluntary nature of participation in the survey. Specially trained female interviewers experienced in conducting surveys on sensitive issues contacted the women upon receipt of the letters to arrange an interview. The interviewers provided all participating women with information on local and national violence services after completion of the interview. Women received a free telephone calling card for their participation. A total of 10,264 women aged between 16 and 86 years from across Germany participated in the survey (Müller & Schröttle, 2004).

The interview process started with a face-to-face interview about women's personal and social environment, feelings of safety, health, and their experiences of violence and abuse by any perpetrator. In addition, women were asked to provide information on their experiences of psychological, physical, and sexual partner violence through a written questionnaire, which they were asked to complete on their own following the face-to-face interview (Müller & Schröttle, 2004). While the face-to-face interviews lasted on average 64 min, the written questionnaire was completed in an average of 18 min. The overall response rate was 52%. When compared with a survey with mandatory participation, younger and older women, as well as women with

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low educational degrees, were underrepresented, while women from urban areas and the former East Germany were overrepresented. These imbalances were addressed with weights provided by the available Micro Census. Further details on the study have been described elsewhere (Müller & Schröttle, 2004; Stöckl, Watts, & Penhale, 2012).

Sample

This study focused on women aged 16 to 49 years, 50 to 65 years, and 66 to 86 years who were currently in a relationship. Two age categories were chosen to acknowledge the heterogeneity among older women. The first category are women aged 50 to 65 years, as this age group is likely to still be part of the labor market and, therefore, enjoying a certain financial independence that might increase their abilities to leave an abusive partner. Also, they are more likely to enjoy a better health overall than women in the older category. Women aged 66 to 86 years comprise those who are above retirement age and might, therefore, be more dependent on their partner's income and pension to consider leaving the relationship. In addition, they could face increased levels of declining physical abilities. Whereas it would have been preferable to conduct a more nuanced analysis with narrower age categories, this was not possible due to the small number of women aged 65 years or older who participated in the study, and the resulting impact this would have had on the significance of the findings. Nevertheless, using two categories is still an improvement on existing quantitative literature on intimate partner violence among older women, which rarely distinguish women above the reproductive age (Fisher et al., 2011; Piispa, 2004). Women aged 16 to 49 years were not analyzed in narrower categories as they mainly served as a comparison group for older women, given that the majority of existing studies on the health effects of intimate partner violence focused on women of reproductive age.

Measurement of Intimate Partner Abuse

This study measured physical and or sexual intimate partner violence, emotional abuse, economic abuse, and controlling behavior. The measurement of physical intimate partner violence was based on a modified version of the revised Conflict Tactics Scale (Straus et al., 1996), which inquired about specific acts of physical violence. Questions on sexual violence by an intimate partner were based on five different acts of sexual violence by an intimate partner. In comparison with the questions on physical violence, they were based on a more narrow definition of explicitly criminal forms of sexual violence. Women who reported experiencing an item of physical or sexual

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violence by their partner once or more than once in the last year were considered to have experienced physical or sexual intimate partner violence.

Measurements for economic abuse, emotional abuse, and controlling behavior were derived from a list of 33 questions (for details on question contents, see Table 2). These covered different types of emotionally or economically abusive or controlling behaviors that women experience by their current partner. Women could answer whether this behavior by their partner was common or not applicable. Different from the questions on physical and sexual intimate partner violence, the 33 questions were asked in the present tense as they related to the current behavior of women's current partners. It is assumed that these behaviors are likely to have occurred in the last year.

As there is no standardized definition or measurement of economic abuse, emotional intimate partner abuse, or controlling behavior, a principal component factor analysis was conducted to identify the latent forms of abuse. All 33 questions loaded clearly to a category that is commonly understood as emotional abuse, economic abuse, or controlling behavior.

All women who answered positively to at least one of the questions on physical and sexual violence in the last year or emotional abuse, controlling behavior, or economic abuse by their current partner were considered to have experienced violence by a current partner. Intimate partner violence by a prior or deceased partner could not be considered because questions on emotional abuse, controlling behavior, and economic abuse were only asked in relation to women's current partners. The focus on the last year's and current experiences of intimate partner violence may impact the findings because it is known that women's experience of intimate partner violence can still affect their physical and mental health even if the relationship has ended, and, moreover, that these impacts may endure over lengthy periods (Bonomi et al., 2006; Ellsberg et al., 2008). However, by measuring multiple forms of abuse and not solely focusing on physical and sexual violence, this bias might be reduced, as existing research on intimate partner violence among older women suggests that abused older women often report long histories of abuse, because one form of abuse is often followed by another (Nägele et al., 2010).

Measurement of Women's Physical and Mental Health

The survey instrument measured women's current physical and psychological health, their history of injuries, and weight problems through 50 questions, which were not based on standardized measures. To reduce the existing information on women's health to workable and objective measurement, a principal component factor analysis was conducted. The resulting health

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indicators were further adjusted following a discussion with a medical doctor to ensure that the derived categories resonated with existing health assessment categories. Women were considered to be positive for one of the health indicators if they reported experiencing one of symptoms in the respective category *often, frequently*, or *rarely*. The *gastrointestinal syndromes* in the last 12 months captured digestion problems, nausea, and eating disorders; the *psychosomatic symptoms* in the last 12 months covered feeling powerless in arms and legs, numbness and thrombosis problems, shaking and nervous twitching, cramps and paralysis, heart and circulation illness, strong sweating, dizziness, low blood pressure, breathlessness, lost voice, and chronic throat problems; and the *pelvic problems* in the last 12 months included pain in the abdomen, pain or infections in intimate areas, sexual problems, menstrual pain, and menstruation being too strong, weak, or irregular. The category *mild psychological problems* in the last 12 months included stress, concentration issues, feeling weak and tired, sleeping problems, nervousness, feeling depressed, lack of motivation, and feeling overwhelmed by everything, whereas *strong psychological problems* in the last 12 months captured feeling fearful or worthless, wanting to die or hurt herself, as well as being a shopaholic. The category *allergy* only contains one question, asking whether the woman suffered from allergies in the last 12 months, and the category *weight issues* asked whether the woman had problems to maintain her weight. In addition, we also analyzed a question on the type of injuries women obtained from their experience of physical and/or sexual intimate partner violence in the descriptive analysis.

Statistical Analysis

This analysis investigated the prevalence of different forms of violence and its associations with physical and mental health symptoms for women aged 16 to 49 years, 50 to 65 years, and 66 to 86 years who were currently in a relationship.

The analysis is based on descriptive statistics on the prevalence of different forms of intimate partner violence and the prevalence of injuries among women who experienced physical and/or sexual intimate partner violence in the three different age groups. Associations between health indicators and different forms of violence were explored by cross tabulations, chi-square statistics, and adjusted odds ratios using multivariate logistic regressions. The dependent variables of the logistic regressions were the health symptoms created through the factor analysis. Physical and/or sexual intimate partner violence, economic abuse, emotional abuse, and controlling behavior were the independent variables. In the final regression, the independent variable

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was the experience of any form of abuse. Adjusting variables included women's occupational training, marital status, number of children, whether they live in an anonymous versus non-anonymous neighborhood, or in an urban versus rural area. Data were missing for less than 5% of respondents for the physical and mental health variables, and women with missing data were excluded from analyses with that variable. The amount of missing information for emotional abuse, controlling behavior, and economic abuse by a current partner is 9% among women aged 16 to 49 years, 11% among women aged 50 to 65 years, and 16% among women above the age of 66 years. Reasons for missing information are that the women either did not participate in the written questionnaire where the questions on current partner's behaviors were posted, or because they did not answer these specific questions. Reasons for nonparticipation or item nonresponse were mainly health related, such as tiredness, visual impairment, or other disabilities or illnesses. In addition, interviews with women above the age of 55 years were more often interrupted by a partner and, therefore, had to be terminated early (Müller & Schröttle, 2004).

Statistical significance is considered at the 5% level. All data were analyzed using STATA 12. As this study is based on cross-sectional data, no interpretation is possible regarding causality and temporality. The low number of women aged 66 to 86 years who reported experiencing physical and sexual violence did not allow conducting a univariate or multivariate analysis among this group, despite the large overall sample size.

Results

In total, 4,448 women aged 16 to 49 years, 2,030 women aged 50 to 65 years, and 779 women aged 66 to 86 years participated in the survey and were currently in a relationship. Younger women were more likely to have high school or university education (16 to 49 years: 25%, 50 to 65 years: 11%, and 66 to 86 years: 6%), to have a partner with high school or university education (15 to 49 years: 32%, 50 to 65 years: 25%, and 66 to 86 years: 17%), to be employed (15 to 49 years: 67%, 50 to 65 years: 42%, and 66 to 86 years: 3%), to have a partner who was employed (15 to 49 years: 86%, 50 to 65 years: 43%, and 66 to 86 years: 2%), and to be of a nationality other than German than older women (15 to 49 years: 9%, 50 to 65 years: 4%, and 66 to 86 years: 2%), or to have a partner of a different nationality (15 to 49 years: 10%, 50 to 65 years: 4%, and 66 to 86 years: 1%). Older women were more likely to live with their current partner (15 to 49 years: 83%, 50 to 65 years: 96%, and 66 to 86 years: 96%). The older women became, the less likely it was that they were living in the same house as their children (15-49 years: 66%, 50-65

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Table 1. Women's Socio-Demographic Characteristics According to Their Age Groups.

	15-49 Years		50-65 Years		66-86 Years	
	N	%	*N*	%	*N*	%
Women's occupational training level						
No occupational training	523	12	305	15	246	32
Occupational training	3,925	88	1,725	85	533	68
Relationship status						
Married or widowed	3,016	68	1,890	93	759	98
Single	1,138	26	24	1	5	1
Divorced/separated	285	6	114	6	14	2
Number of children						
No child	1,214	27	185	9	64	8
1-2 children	2,545	57	1,359	67	467	60
3-12 children	685	15	485	24	247	32
Women's perception of their neighborhood						
Good neighborhood	2,496	57	1,245	62	472	61
Anonymous	1,906	43	774	38	304	39
Woman lives in a rural or urban area						
Urban	3,034	68	1,370	67	508	65
Rural	1,414	32	660	33	271	35

years: 23%, and 66-86 years: 6%). Additional socio-demographic factors used in the multivariate analysis are outlined in Table 1.

Prevalence of Different Forms of Abuse

This study investigated four different forms of intimate partner violence—physical and sexual violence, emotional abuse, controlling behavior, and economic abuse. As seen in Table 2, the prevalence rates of these forms of violence were nearly the same across all the age groups, except for physical and/or sexual intimate partner violence in the last year. Physical and sexual intimate partner violence in the last year decreased from 8% among women aged 16 to 49 years to 3% among women aged 50 to 65 years, and further down to 1% among women aged 66 to 86 years. Of the women aged 16 to 49 years, 33% experienced all forms of abuse by their current partner; among the women aged 50 to 65 years, the prevalence of all forms was 30%; and among women above the age of 65 years, the similar prevalence rate was 27%.

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Table 2. Prevalence of Different Forms of Abuse According to Women's Age.

	16-49 Years		50-65 Years		66-86 Years	
	N	%	*N*	%	*N*	%
Physical or sexual violence, or both in the last year	374	8	62	3	6	1
(Partner pushed, lightly slapped, bit or scratched her, twisted her arm, kicked, shoved, hardly slapped or threw something at her, hit her with an object, seriously threatened to assault or kill her, hit her with a fist, beat her up, strangled, scalded or burned, threatened or injured her with a weapon, physically assault her in another way and tried to or actually forced her to sexual intercourse)						
Emotional abuse in women's current relationship	514	13	236	13	83	13
(Partner says she is ridiculous, stupid or incapable, ignores her, does not answer her questions, pretends that she is not there, intimidates her when she has a different opinion or with his angry, unpredictable and aggressive behavior, blames her for everything and makes her feel guilty, scolds her, insults her or purposefully says things to hurt her or puts her down in front of others)						
Controlling behavior in women's current relationship	868	21	378	21	137	21
(Partner is jealous and prevents contacts with other men or women, makes decisions that concern me or both of us on his own, controls exactly where I go and with whom what I do and when I come back, controls my post, my phone calls and my e-mails, prevents me meeting friends, acquaintances or relatives and decides what I should or should not do)						
Economic abuse in women's current relationship	497	12	253	14	88	13
(Partner controls exactly how much money I spend on what, makes me feel that I am financially dependent on him and does not let me decide about money or things I want to buy by myself)						
Any form of abuse behavior	1,463	33	617	30	213	27

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A detailed analysis of the distribution of the different forms of violence found that the most frequent form of intimate partner violence that women across all age groups experienced if they reported any form of abuse by their partner was controlling behavior without the presence of other forms of abuse, with 28% of all women aged 16 to 49 years, 29% of all women aged 50 to 65 years, and 33% of all women aged 66 to 86 years who reported any form of violence reporting only experiencing of controlling behavior. Experiencing a combination of all four forms of violence was only stated by 3% (15 to 49 years) and 2% (50 to 65 years) of the women. None of the women aged 66 to 86 years reported experiencing all four forms of intimate partner violence.

Among those women who reported any form of abuse, economic abuse only was the second most prevalent form of abuse, at 17% among women aged 50 years or older, compared with a slightly lower figure of 13% for women younger than 49 years (and 15% for women between 66 and 86 years). Whereas women younger than 65 years only reported emotional abuse at a rate of 13%, women older than 66 years reported emotional abuse only in 12% of situations. In addition, more older women (66 years plus) experienced emotional abuse and controlling behavior, but not controlling behavior or physical and sexual intimate partner violence than younger women (12% as compared with 11% and 9%, respectively). They were also more likely to experience a combination of emotional abuse, economic abuse, and controlling behavior but not physical and sexual violence (11% compared with 7% and 8% for both the other groups).

Hematoma and blue spots as a result of physical and/or sexual intimate partner violence were reported among 58% of the women aged 15 to 49 years, 57% of the women aged 50 to 65 years, and 33% of the women aged 66 to 86 years. Women aged 66 to 86 years, with 17%, were significantly more likely to report a torn muscle or a dislocated joint, and, with 20%, to report a broken bone than women aged 15 to 49 years (13% and 3%, respectively) and women aged 50 to 65 years (12% and 3%, respectively) as a result of physical intimate partner violence.

Associations With Physical and Mental Health Symptoms

Tables 3 and 4 both show how each form of intimate partner violence is associated with different health symptoms across the different age groups. The experience of physical and sexual intimate partner violence in the last year was significantly associated with all health symptoms investigated among women aged 16 to 49 years, and nearly all among women aged 50 to 65 years (Table 2). For women aged 66 to 86 years, the experience of physical and

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Table 3. Health Symptoms Associated With Physical and/or Sexual Violence and Emotional Abuse by an Intimate Partner Across Different Age Groups, Adjusted for Women's Occupational Training, Marital Status, Number of Children, Neighborhood Quality, and Urban or Rural Area.

	Sexual and Physical Violence						Emotional Abuse					
	16-49 Years		50-65 Years		66-86 Years		16-49 Years		50-65 Years		66-86 Years	
	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)
Gastrointestinal syndromes in the last year	**72**	**2.00*** [1.49, 2.69]**	**50**	1.06 [0.60, 1.86]	74	—	**65**	**1.53*** [1.21, 1.93]**	**61**	**1.82*** [1.32, 2.51]**	**66**	**2.87*** [1.65, 4.99]**
Psychosomatic symptoms in the last year	**88**	**2.34*** [1.59, 2.69]**	92	2.09 [0.84, 5.18]	100	— —	**85**	**2.18*** [1.65, 2.92]**	**93**	**2.56** [1.41, 4.65]**	94	1.54 [0.54, 4.44]
Pelvic problems in the last year	**77**	**2.13*** [1.56, 2.89]**	**51**	**2.55*** [1.43, 4.53]**	38	—	**74**	**2.02*** [1.58, 2.58]**	**41**	**1.82*** [1.30, 2.54]**	23	1.72 [0.92, 3.21]
Allergy in the last year	**58**	**1.46** [1.12, 1.91]**	**4**	1.48 [0.81, 2.68]	52	—	**55**	**1.29* [1.03, 1.62]**	**46**	**1.69**** [1.22, 2.35]	39	1.22 [0.68, 2.19]
Mild psychological problems in the last year	**99**	**7.55** [1.91, 29.80]**	**97**	2.70 [0.47, 15.46]	86	—	**99**	**3.98** [1.62, 9.76]**	**97**	**3.21* [1.33, 7.73]**	100	1 [1.00, 1.00]
Strong psychological problems in the last year	**60**	**2.28*** [1.74, 2.99]**	**59**	**3.24*** [1.81, 5.79]**	60	—	**61**	**2.96*** [2.35, 3.73]**	**48**	**2.45*** [1.76, 3.41]**	**43**	**2.53*** [1.47, 4.37]**
Problems with weight	**71**	**1.43** [1.09, 1.86]**	**69**	1.48 [0.82, 2.69]	74	—	**72**	**1.84*** [1.46, 2.31]**	**34**	**1.93*****	**[1.39, 2.68]**	**1.88*** [1.10, 3.20]

Note. CI = confidence interval; OR = odds ratio; bold values indicate statistical significance.
*$p < .05$. **$p < .01$. ***$p < .001$.

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Table 4. Health Symptoms Associated With Controlling Behavior and Economic Abuse by a Partner Across Different Age Groups, Adjusted for Women's Occupational Training, Marital Status, Number of Children, Neighborhood Quality, and Urban or Rural Area.

	Controlling Behavior						Economic Abuse					
	16-49 Years		50-65 Years		66-86 Years		16-49 Years		50-65 Years		66-86 Years	
	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)
Gastrointestinal syndromes in the last year	**61**	**1.33**** **[1.11, 1.60]**	**55**	**1.41*** **[1.08, 1.84]**	**49**	**1.54*** **[1.98, 2.43]**	59	1.18 [0.94, 1.48]	**60**	**1.75**** **[1.27, 2.42]**	54	1.62 [0.93, 2.80]
Psychosomatic symptoms in the last year	**80**	**1.52***** **[1.22, 1.88]**	**90**	**1.71*** **[1.09, 2.68]**	**97**	**3.65*** **[1.22, 10.90]**	74	0.96 [0.74, 1.24]	**91**	**2.05*** **[1.21, 3.46]**	96	2.60 [0.84, 8.06]
Pelvic problems in the last year	**68**	**1.48***** **[1.23, 1.79]**	**38**	**1.78***** [1.34, 2.36]	**22**	**1.86*** [1.06, 3.28]	**65**	**1.32*** **[1.05, 1.67]**	34	1.34 [0.95, 1.89]	22	1.66 [0.86, 3.21]
Allergy in the last year	51	1.18 [0.98, 1.41]	**42**	**1.43*** **[1.08, 1.91]**	**28**	0.94 **[0.57, 1.55]**	45	0.89 [0.70, 1.12]	**43**	**1.51*** [1.07, 2.14]	34	1.14 [0.62, 2.11]
Mild psychological problems in the last year	**98**	**1.92*** **[1.01, 3.64]**	94	1.69 [0.91, 3.16]	**97**	**3.85*** [1.24, 12.00]	96	0.88 [0.49, 1.59]	95	1.91 [0.94, 3.87]	99	**6.12*** **[1.55, 24.85]**
Strong psychological problems in the last year	**50**	**1.87***** **[1.56, 2.26]**	**60**	**1.92***** **[1.45, 2.54]**	**42**	**2.78***** **[1.75, 4.42]**	**51**	**1.90***** **[1.51, 2.38]**	**38**	**1.63**** [1.16, 2.29]	**43**	**2.53**** **[1.45, 4.41]**
Problems to keep weight	**66**	**1.48**** **[1.23, 1.71]**	**60**	**1.59***** [1.21, 2.08]	48	1.35 [0.85, 2.13]	**64**	**1.47***** **[1.17, 1.85]**	**63**	**1.59**** [1.13, 2.22]	46	1.40 [0.80,2.45]

Note. CI = confidence interval; OR = odds ratio; bold values indicate statistical significance.
$^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

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sexual violence by their current partner could not be analyzed as only 6 women reported physical and sexual intimate partner violence in the last year. Furthermore, Table 3 also shows that emotional abuse was also strongly associated with nearly all health symptoms for women aged 16 to 49 years and women aged 50 to 65 years. However, women above the age of 65 years who experienced emotional abuse by their partner were significantly more likely to report gastrointestinal syndromes and strong psychological problems in the last year and to have reported problems with their weight.

The experience of controlling behavior was associated with health symptoms for women across all age groups, as can be seen in Table 4. Women across all age groups who had a partner who was controlling had higher likelihoods of experiencing gastrointestinal syndromes, psychosomatic symptoms, pelvic problems, and strong psychological problems. Controlling behavior was further associated with allergies and weight problems among women aged 50 to 65 years, mild psychological problems and weight problems among women aged 16 to 49 years, and mild psychological problems among women above the age of 65 years. Economic abuse showed fewer associations with health symptoms than other forms of intimate partner violence investigated in this study. As illustrated in Table 4, economic abuse showed most associations with health symptoms among women aged 50 to 65 years, being associated with increased gastrointestinal and psychosomatic syndromes, allergy and hair loss, and weight problems. Women below the age of 50 years who experienced economic abuse by their partner were more likely to report pelvic problems and weight problems, while women above the age of 65 years reported more mild psychological problems from such abuse. Women across all ages who experienced economic abuse by their partner were more likely to have strong psychological problems.

The associations between experiencing any form of violence with different health symptoms, as outlined in detail in the previous tables, are summarized in Table 5. Experiencing any form of intimate partner violence was associated with nearly all health symptoms among women of all age groups.

Discussion

To the knowledge of the authors, this is the first study to investigate the prevalence of different forms of intimate partner violence among women aged 15 to 49 years, 50 to 65 years, and 66 to 86 years and to compare the health symptoms associated with those different forms of intimate partner violence across those different age groups, using nationally representative survey data. In agreement with previous findings of smaller scale studies (Straka & Montminy, 2006; Zink et al., 2006), there was a decrease in the prevalence of

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Table 5. Health Symptoms and Their Association With Experiencing at Least One Form of Intimate Partner Violence (Physical, Sexual, Economic or Psychological Abuse or Controlling Behavior), Adjusted for Women's Occupational Training, Marital Status, Number of Children, Neighborhood Quality, and Urban or Rural Area.

	16-49 Years			50-65 Years			66-86 Years		
	All %	IPV %	OR (95% CI)	All %	IPV %	OR (95% CI)	All %	IPV %	OR (95% CI)
Gastrointestinal syndromes in the last year	56	**61**	**1.42***** **[1.22, 1.66]**	49	**54**	**1.41**** **[1.12, 1.77]**	44	**54**	**1.80**** **[1.24, 2.61]**
Psychosomatic symptoms in the last year	74	**79**	**1.42***** **[1.19, 1.69]**	85	**91**	**2.15***** **[1.56, 3.24]**	91	**97**	**3.66**** **[1.62, 8.25]**
Pelvic problems in the last year	60	**68**	**1.62***** **[1.39, 1.90]**	28.9	**36**	**1.65***** [1.29, 2.10]	15	**21**	**1.70*** **[1.05, 2.78]**
Allergy in the last year	48	**52**	**1.22***** **[1.05, 1.42]**	35	**40**	**1.43***** **[1.12, 1.84]**	33	32	1.09 [0.72, 1.67]
Mild psychological problems in the last year	96	**98**	**2.41***** **[1.51, 3.85]**	92	**95**	**1.86*** [1.13, 3.07]	92	**98**	**4.29**** **[1.81, 10.20]**
Strong psychological problems in the last year	38	**49**	**1.85***** **[1.58, 2.16]**	30	**38**	**1.74***** [1.37, 2.22]	26	**39**	**2.44***** **[1.63, 3.63]**
Problems to keep weight	59	**65**	**1.53***** **[1.31, 1.78]**	55	**62**	**1.52***** **[1.21, 1.92]**	41	**50**	**1.79*** **[1.21, 2.63]**

Note. CI = confidence interval; IPV = intimate partner violence; OR = odds ratio; bold values indicate statistical significance
*$p < .05$. **$p < .01$. ***$p < .001$.

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physical and sexual intimate partner violence with women's increased age. At the same time, other forms of intimate partner violence remained the same across different age groups, and whereas the most prevalent form of abuse indicated across all age groups was controlling behavior, a slight increase was found in the prevalence of economic abuse among older women. While women below the age of 65 years were more likely to report hematoma and blue spots as a result of physical and/or sexual intimate partner violence, women above the age of 65 years were more likely to report broken bones or dislocated joints. Furthermore, intimate partner violence, both in the generally acknowledged form of physical and sexual violence, as well as in the nonphysical forms of emotional and economic abuse and controlling behavior, was associated with increased negative health symptoms of women. Women below the age of 50 years showed stronger associations with health symptoms than older women. This might point toward methodological reasons and limitations of the study, as well as actual differences.

Methodological reasons refer to the lower reporting rates of intimate partner violence found among women above the age of 65 years and might be related to recall and social desirability bias, or a lack of recognition or identification of the violent behavior as such (Stöckl et al., 2012). Older women could be more likely to underreport intimate partner violence because their experiences of violence in their current relationships may have occurred more than 20 years ago if they are in a long-standing relationship. This might make them less likely to report a violent event than a woman who experienced violence only a few years ago (Walby, 2005). In addition, for more recent incidents of abuse, such experiences may have been normalized and not perceived as problematic but rather seen as part of everyday life within the relationship. Social desirability biases refer to older women being less willing or able to report violence by their current partner due to their socialization, upbringing, and feelings of stigma and shame, as well as their current economic and social status or isolation (Rennison & Rand, 2003). The lack of recognition of violent behavior as violence refers to the belief that violence has to be physical or sexual (Fisher et al., 2011) and the connotation that violence involves some overt act that results in an injury. A further limitation that was noted in this study is that it was more difficult for researchers to conduct interviews with older women in complete privacy, because their partners, their children, or their caretakers were often present for at least some part of the interview (Müller & Schröttle, 2004). A lack of privacy is known to strongly affect the reporting of intimate partner violence as it might put women at risk of further violence or because it simply ignores their rights and the likely perceived need to keep this information private from their caretakers, or anyone else (Fisher et al., 2011; Walby, 2005).

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Other factors that might have influenced the reporting of violence across all age groups, as well as the conclusions that can be drawn from this study, refer to additional and further limitations of this study. For example, the response rate of this survey was 52%, and nonparticipation was linked to women's age, with very old women being less likely to participate and more often requiring assistance with completion of the written questionnaire due to health reasons, or even refusing to complete the self-completion questionnaire. Furthermore, the study, which is cross-sectional by design, cannot establish causality. It is, therefore, not known if the investigated health conditions are a result of the violence experienced, or were already preexisting. Also, the low reporting rate among women aged 66 to 86 years did not permit the exploration of multivariate associations.

The lower reporting rate of physical and or sexual partner violence and lower number of health symptoms could also be a consequence of actual differences across the age groups. For the few health associations among the oldest age group relating to physical and sexual intimate partner violence, two explanations are that physical and sexual violence might only have occurred early on in the relationship and had since then been replaced by other forms of abuse. In addition, it is possible that now in later life the aging partners themselves were likely to have reduced strength to commit acts of physical and sexual abuse. However, the strong associations seen with both mild and strong psychological problems show that the pervasive atmosphere of violence still strongly affects women's mental well-being. This responds to the category found in the qualitative study on intimate partner violence among older couples: "Violence is in the air." It describes couples' relationships where there are occasional outbursts of violence, which are not too frequent, but where abusive partners still maintain an atmosphere of fear and control, with the ever-present feeling of imminent danger for the woman herself (Band-Winterstein & Eisikovits, 2009). Long-standing serious psychological problems may of course have major impacts on the quality of life and well-being of older women, but it may be less likely that an older woman in the 66+ years group would be able to leave the situation and establish herself in alternative accommodation elsewhere. Furthermore, a previous study, using the same dataset to investigate the risk factors for intimate partner violence among older women found that women above the age of 65 years were more likely to experience physical and or sexually intimate partner violence if they had high levels of education (Stöckl et al., 2012). High levels of education are also known to be associated with better health, which could mean that women above the age of 65 years who had a higher level of educational attainment were more likely to experience intimate partner violence but also more likely to seek appropriate health care or to have better baseline levels of general health.

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The importance of other forms of violence beyond physical and sexual violence for women's health is shown across all age groups, with controlling behavior having strong associations across several health symptoms. The health consequences of emotional and economic abuse, as well as controlling behavior, all showed that it significantly impacts women's psychological well-being, with many health consequences either being clearly psychological problems, or health consequences that are known symptoms of psychological stress, such as gastrointestinal, psychosomatic, or pelvic problems, or eating disorders.

Conclusion

Overall, our study has shown that intimate partner violence in its different forms is still a prevalent issue, with important health consequences for women above reproductive age. Health and care professionals who screen women for intimate partner violence should consider incorporating questions on controlling behavior as well, because this form of violence is not only frequent but has multiple health outcomes, as this study showed. Asking women about any controlling behavior of their partner might be more comfortable for the health care or service care provider than to ask about physical and sexual violence. It might also be more acceptable for older women to discuss these questions, since these forms of abuse are often not perceived as violence and could, therefore, be perceived as less private and less controversial to talk about.

Furthermore, specialized violence services or health care or caring professionals who offer assistance to women who experience intimate partner violence must take the experiences and needs of older women into account as well. This can mean, for example, a need to acknowledge the generational values held by older women who experience intimate partner violence and to understand how those values might influence women's decision-making processes (Tetterton & Farnsworth, 2011). One example of this would be decisions to either leave or stay in the abusive relationship, which are affected by views about the enduring nature and importance of marriage as an institution. At the same time, given that most older women have lived in their abusive relationships for a long time, it is important to determine what the woman has already done in the past to resolve or cope with the occurrence of intimate partner violence. In addition, it is important to establish how effective these previous strategies were (Tetterton & Farnsworth, 2011), and what might need to be done to support the women to continue to manage such occurrences in the future. It is also necessary to acknowledge that older women may not be aware about available sources of support and/or services. This is

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perhaps particularly likely if the woman does not associate emotional or economic abuse and controlling behavior as part of a spectrum of violence and, therefore, does not recognize that provision of such services might be applicable to them, or that any assistance might be available to help and support women who live in and endure such situations.

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