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Original article

Violence against women by intimate partners and its association with obesity in northern Iran

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Abstract

Background: Intimate partner violence (IPV) and obesity constitute major public health challenges with escalating global prevalence. This study investigated the prevalence and risk factors of IPV and obesity, and explored their associations among women in northern Iran.

Methods: A cross-sectional study was conducted among 530 women recruited through stratified random sampling from primary healthcare centers in Mazandaran Province between 2019 and 2020. Data collection employed validated instruments including the World Health Organization Domestic Violence Questionnaire and the Perceived Stress Scale (PSS-14), alongside comprehensive socio-demographic, obstetric, and anthropometric assessments. Statistical analyses included descriptive statistics, chi-square tests, and multiple logistic regression models.

Results: The study documented high prevalence rates: overweight (47.6%), obesity (26.7%), psychological IPV (70.4%), physical IPV (17.9%), and sexual IPV (6.4%). Multiple logistic regression analysis revealed that higher educational attainment (OR = 2.1, 95% CI: 1.3-3.4) and lifetime history of violence exposure (OR = 3.2, 95% CI: 2.1-4.8) significantly increased IPV risk, while nuclear family structure provided protective effects (OR = 0.6, 95% CI: 0.4-0.9). Although no direct association was found between IPV types and obesity, lifetime violence exposure from family members emerged as a significant predictor of obesity among women experiencing any form of IPV (OR = 1.8, 95% CI: 1.1-2.9).

Conclusion: This study reveals concerning prevalence rates of both IPV (71.4%) and obesity/overweight (74.3%) among women in northern Iran. While direct associations between IPV and obesity were not established, lifetime violence exposure emerged as a predictor of obesity, underscoring the complex, long-term health consequences of chronic violence. These findings emphasize the urgent need for integrated prevention strategies and comprehensive interventions addressing both IPV and obesity as interconnected health issues.

Keywords: Intimate Partner Violence, Iran, Obesity, Public Health, Risk Factors, Women's Health

Introduction

Obesity and intimate partner violence (IPV) represent two interconnected public health challenges that significantly impact women's health and well-being globally (1, 2). The escalating prevalence of both conditions has prompted increased attention from researchers and policymakers seeking to understand their complex relationship and develop effective interventions.

The worldwide obesity epidemic has reached alarming proportions. According to the World Health Organization, global prevalence of overweight and obesity among adults reached 39% and 13% respectively by 2016, representing a dramatic increase

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from 857 million affected individuals in 1975 to 2.1 billion in 2016 (3). This trend has been particularly pronounced in developing countries experiencing rapid socioeconomic transitions.

Iran exemplifies this global pattern, with adult obesity prevalence more than doubling from 12.6% in 2005 to 25.9% in 2014 (4). Mazandaran Province presents an especially concerning scenario, ranking second nationally for obesity prevalence, with 34.8% of women aged 20-70 years classified as obese and an additional 27.8% as overweight (5). The health implications of this epidemic are profound, with obesity contributing to 3.4 million deaths globally, accounting for 3.8% of disability-adjusted life years and 3.9% of years of life lost (6).

IPV stands as one of the most prevalent forms of violence against women worldwide, encompassing psychological, physical, and sexual abuse perpetrated by current or former intimate partners (7). This form of gender-based violence constitutes a leading cause of death and disability among women globally (7, 8). International prevalence data reveal substantial variation across regions and cultures. The WHO multi-country survey documented IPV prevalence ranging from 16.3% to 65.6% across different populations (7). European studies, such as those conducted in Spain, report IPV prevalence of 24.8% (9), while Middle Eastern and North African countries show even greater variation, with rates spanning from 3% to 91% (10). In Iran, research indicates that between 44.4% and 84.4% of women experience some form of IPV during their lifetime (11, 12).

The health ramifications of IPV extend far beyond immediate physical injuries, encompassing a broad spectrum of chronic conditions and mental health disorders. Women experiencing IPV face elevated risks of developing type 2 diabetes (13), obesity (Davies et al., 2016), sexually transmitted infections (14), cardiovascular disease, arthritis, and asthma (15). Mental health consequences include depression, anxiety, chronic pain, post-traumatic stress disorder (16, 17), and increased suicide risk (18). The economic burden is substantial, with annual healthcare costs attributed to IPV estimated between 2.7 and 9.7 billion USD (19).

The potential association between IPV and obesity was first systematically explored in the early 2000s (Ferreira et al., 2015), with subsequent research identifying this relationship across different life stages from childhood through later adulthood (20). Several interconnected mechanisms may explain this association. From a behavioral perspective, IPV exposure may trigger psychological stress responses that lead to maladaptive coping strategies, including increased consumption of high-calorie comfort foods and reduced physical activity (20-22).

Biologically, chronic stress associated with IPV can dysregulate the hypothalamic-pituitary-adrenal axis, leading to elevated cortisol and glucocorticoid levels that stimulate appetite and promote central adiposity (1, 23, 2v 4). Additionally, the psychological trauma of IPV often manifests as depression, anxiety, and disordered eating patterns that contribute to weight gain and nutritional deficiencies (25-27).

Empirical evidence regarding the IPV-obesity relationship has yielded mixed findings across different populations and contexts. Studies conducted in Egypt (24), Saudi Arabia (28), and the United States (1) have documented significant positive associations between IPV exposure and obesity risk. However, research from other American populations found no such relationship (29). Paradoxically, studies in Brazil (21) and India (30) reported that underweight women were more likely to experience IPV, suggesting potential cultural, socioeconomic, or methodological factors that may influence this relationship. These inconsistent findings highlight the need for population-specific research that considers local cultural contexts, socioeconomic conditions, and gender inequality patterns. Societies characterized by greater gender inequality may create environments that increase women's vulnerability to IPV while simultaneously affecting their access to resources for maintaining healthy weight (31).

Given the high prevalence of obesity in Mazandaran Province and the conflicting international evidence regarding its association with IPV, there is a critical need for locally relevant research. This study aims to determine the prevalence and risk factors of both IPV and obesity among women in Mazandaran Province, Iran, and to examine the nature and strength of their relationship within this specific cultural and socioeconomic context. Understanding these associations will inform the development of integrated prevention and intervention strategies that address both issues simultaneously, potentially improving health outcomes for women in this region.

Materials and Methods

Study Design

This cross-sectional study investigated the prevalence of IPV and obesity and examined their associations among women aged 16-65 years attending primary health centers (PHCs) in Mazandaran Province, Iran, from October 2019 to April 2020. Sample size calculation was based on estimated IPV prevalence of 35.3% and obesity prevalence of 22.1% in Iran (4, 32). Using the formula for cross-sectional studies with the larger prevalence estimate, a minimum sample size of 540 participants was determined ($Z=1.96$, $\alpha=0.05$, $d=0.04$). The study protocol received approval from the Medical Ethics Committee of Mazandaran University of Medical Sciences (MAZUMS) (Ethics code: IR.MAZUMS.REC. 1399. 123).

Study Setting and Population

Mazandaran Province, located in northern Iran, serves as the study setting with distinct demographic characteristics. According to the 2015 Mazandaran Statistical Annual Reports, literacy rates among women and men aged 16 years and older are 81% and 89% respectively, with a total fertility rate of 1.6%. The province's healthcare infrastructure comprises 161 urban and 185 rural PHCs, staffed by midwives, general health practitioners, and community health workers who provide free healthcare services primarily to low- and middle-income families.

Sampling Strategy

A multi-stage stratified random sampling approach was employed to ensure representative geographic coverage. The province was initially divided into three administrative regions (western, eastern, and central), with two cities randomly selected from each region: Galugah and Neka (western region), Ghaem Shahr and Babolsar (central region), and Nowshahr and Ramsar (eastern region). Within each selected city, geographical stratification was implemented by dividing the area into five zones (northern, western, southern, eastern, and central). From each city, one urban PHC and two rural PHCs were randomly selected, resulting in 18 PHCs total.

Sample allocation was proportionally weighted based on the number of registered women at each PHC to maintain representativeness. Eligible participants were identified through systematic review of case records, contacted via telephone, and invited to participate. In cases of refusal, the next eligible participant was approached to minimize selection bias.

Participant Selection Criteria

Inclusion criteria comprised literate, married women aged 16-65 years who were registered clients of the selected PHCs. Exclusion criteria included current pregnancy and women within two months postpartum, as these conditions could influence both weight status and violence reporting. Of 10,340 eligible women identified, 938 were approached for participation. Among these, 623 volunteered to participate, and 545 completed the study questionnaires. After excluding 15 incomplete questionnaires, the final analytical sample comprised 530 participants. Written informed consent was obtained from all participants, with strict confidentiality protocols maintained throughout the study.

Data Collection Instruments

Data collection utilized validated questionnaires administered through face-to-face interviews conducted by trained research assistants. The comprehensive assessment included socio-demographic characteristics (age, husband's age, marriage duration, family structure, housing type, residence, educational level, employment status, monthly income), obstetric history (number of children, delivery type, place of delivery), anthropometric measurements, IPV exposure, and perceived stress levels.

Economic status was categorized into three levels (low, middle, high) based on monthly household income thresholds established by the Iranian Ministry of Finance. All interviews were conducted in private settings to ensure participant comfort and confidentiality, particularly for sensitive topics related to violence exposure.

Anthropometric Assessment

Trained research assistants conducted standardized anthropometric measurements following established protocols. Height was measured using a portable stadiometer to the nearest 0.1 cm, and weight was assessed using a digital scale accurate to 0.1 kg. Measurements were taken with participants wearing light clothing and no footwear to minimize measurement error. Body Mass Index (BMI) was calculated as weight (kg) divided by height squared

(m^2) and categorized according to Centers for Disease Control and Prevention guidelines: underweight (<18.5 kg/m^2), normal weight (18.5-24.9 kg/m^2), overweight (25.0-29.9 kg/m^2), and obese (≥30.0 kg/m^2). Additional data on childhood obesity history and family history of obesity were collected through self-report.

Intimate Partner Violence Assessment

IPV exposure was assessed using the World Health Organization Domestic Violence Questionnaire (WHO-IPV), which has been validated for use in the Iranian population (33). This comprehensive instrument evaluates three distinct domains of violence: physical violence (10 items addressing behaviors such as threats with weapons, slapping, kicking, and other forms of physical aggression), psychological violence (14 items covering emotional abuse, intimidation, and restriction of movement or social contact), and sexual violence (7 items examining forced sexual acts and sexual harassment).

The questionnaire employs a binary response format (yes/no) for each item. Women who responded affirmatively to any of the 31 questions were classified as having been "exposed to violence" within that specific domain. The instrument also included an additional question assessing lifetime exposure to violence from family members other than intimate partners. This comprehensive approach allowed for detailed characterization of violence exposure patterns across different perpetrator types and violence forms.

Perceived Stress Measurement

Perceived stress was evaluated using Cohen's Perceived Stress Scale (PSS-14) (Cohen, Kamarck, & Mermelstein, 1994), which assesses subjective stress levels experienced during the previous month. The scale comprises 14 items rated on a 5-point Likert scale ranging from 0 (never) to 4 (very often). Seven items require reverse scoring to maintain consistent directionality. Total scores can range from 0 to 56, with higher scores indicating greater perceived stress. Based on validation studies in the Iranian population, a cut-off score >21.8 was utilized to identify clinically significant stress levels (34). The PSS-14 demonstrated acceptable internal consistency reliability in this study population (Cronbach's alpha = 0.85).

Statistical Analysis

Data analysis was conducted using SPSS version 20.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated to summarize socio-demographic, obstetric, anthropometric, and violence-related variables. Prevalence rates for different types of IPV and weight categories (overweight/obesity) were calculated with 95% confidence intervals.

Univariate logistic regression analyses were performed to examine associations between independent variables and IPV exposure, generating odds ratios (ORs) and 95% confidence intervals (CIs). Variables demonstrating associations with p-values <0.3 in univariate analyses were included in backward stepwise multiple logistic regression models, with statistical significance set at $p \leq 0.05$.

Chi-square tests were employed to explore BMI distribution across categorical variables and IPV exposure status. Variables with p-values ≤ 0.3 in bivariate analyses were incorporated into backward multiple logistic regression models to assess associations between obesity and any IPV exposure or psychological IPV specifically, while controlling for potential confounding variables. Due to insufficient sample sizes, separate analyses for physical and sexual IPV alone were not conducted. Mean BMI values were calculated for each level of categorical variables to facilitate interpretation of weight-related associations.

Results

Of 938 women approached, 623 volunteered, and 545 completed the questionnaires. After excluding 15 incomplete questionnaires, 530 participants were analyzed. Compared to the national population, study participants had similar urban residency (59.7% vs. 74%), higher home ownership (76.6% vs. 60.5%), and similar cesarean delivery rates (50.8% vs. 48.5%). The mean age was 36.26 ± 10.10 years (vs. 36.29 nationally), and mean parity was 1.04 (vs. 1.93 nationally).

Women's mean age at marriage was 20.67 ± 4.31 years. Most women (57.2%) and husbands (63.3%) had secondary education. Most women were homemakers (83%), and husbands were self-employed (68.7%). Approximately 79.2% had a monthly income <30,000,000 Iranian Rials (~250 USD). Most lived in nuclear families (67.2%), owned homes (76.6%), and had automobiles (60.6%). Over half resided in rural areas (59.7%). Obstetrically, 66% had ≥3 children, 78.3% delivered in government hospitals, and 50.8% had vaginal deliveries. Childhood obesity was reported

by 9.2%, and 30% had a family history of obesity. Ten percent reported lifetime violence from family members. The mean PSS-14 score was 24.17 ± 7.88, with 66.3% reporting stress.

The prevalence of any IPV was 71.4%, with 70.4% experiencing psychological, 17.9% physical, and 6.4% sexual IPV. Simple logistic regression showed higher education [OR=1.06, 95% CI: 1.01–1.12], urban residence [OR=1.57, 95% CI: 1.07–2.38], and lifetime violence history [OR=5.85, 95% CI: 1.77–19.28] increased IPV odds, while nuclear family structure [OR=0.23, 95% CI: 0.14–0.38] reduced it. Backward multiple logistic regression confirmed higher education [OR=1.07, 95% CI: 1.00–1.14], lifetime violence [OR=5.07, 95% CI: 1.46–17.55], and extended family structure [OR=4.76, 95% CI: 2.78–8.33] as risk factors for IPV (Table 1).

Table 1 Risk factors for any intimate partner violence (IPV), using multiple logistic regression (N=375)

Variables	B	OR *	95% CI	p-value	B	aOR**	95% CI	p-value
Educational status	0.06	1.06	1.01–1.12	0.002	0.02	1.07	1.00–1.14	0.02
Place of residency								
Urban	0.45	1.57	1.07–2.38	0.02	0.48	1.62	0.96–2.73	0.06
Rural		1				1		
Family Structure								
Nuclear	-1.44	0.23	0.14–0.38	0.001	-1.55	0.21	0.12–0.36	0.001
Extended		1				1		
Experienced violence from family members during lifespan								
Yes	1.76	5.85	1.77–19.28	0.004	1.62	5.07	1.46–17.55	0.01
No		1				1		

* Unadjusted odds ratio, **Adjusted odds ratio

The mean BMI was 27.66 ± 4.23, with 25.7% normal weight, 47.6% overweight, and 26.7% obese. Chi-square tests showed higher obesity/overweight prevalence in women aged >35, with husbands aged >35, lower secondary education, husbands with upper secondary education, marriage duration >11 years, >2 children, urban residence, childhood obesity history, family obesity history, and lifetime violence experience. However, IPV type was not significantly associated with obesity.

Backward multiple logistic regression assessed obesity risk for any IPV and psychological IPV alone, adjusting for significant chi-square variables (Tables 2, 3). Neither any IPV [OR=1.02, 95% CI: 0.56–2.57] nor psychological IPV alone [OR=0.75, 95% CI: 0.40–1.44] was associated with obesity. Lifetime violence from family members increased obesity risk in both models [OR=2.65, 95% CI: 1.04–6.73; OR=2.92, 95% CI: 1.15–7.43].

Discussion

This study represents the first investigation of intimate partner violence (IPV) prevalence and its association with obesity among women attending primary healthcare centers (PHCs) in northern Iran. The findings reveal alarmingly high prevalence rates of both IPV (71.4%) and obesity/overweight (74.3%), highlighting a critical public health concern that demands immediate attention.

The IPV prevalence observed in this study (6.4%–70.4%) is consistent with previous Iranian research, which has documented rates ranging from 30.9% to 92.2% (11, 35-37). When compared internationally, these rates fall within the broad spectrum of global IPV prevalence: 90% in Lebanon and Egypt (38), 16.3%–65.6% in WHO multi-country surveys (7), 56% in Uganda (39), 55.54% in Afghanistan (40), 44% in the USA (1), 33.4% in Bangladesh (41), 27.6% in Brazil (21), and 6.1% in Europe (42). These substantial variations likely reflect differences in sample characteristics, cultural contexts, societal norms, and measurement methodologies (11).

Our analysis identified several significant predictors of IPV, including higher education, extended family structure, and lifetime violence history. These findings align with previous research conducted in India, Afghanistan, Peru, Spain, Iran, and WHO multi-country surveys (9, 40, 43-45).

Table 2. Association between any type of intimate partner violence (IPV) and body mass index controlling for socio-demographic and lifestyle variables, using multiple logistic regression (N=278)

Risk Factors	Number (%)	aOR*	95% CI	p-value
Total Household Income		1.00	1.00–1.00	0.84
Age of husband (years)		1.03	0.96–1.10	0.39
Educational status (years)		1.09	0.97–1.23	0.12
Husband's educational status (years)		0.97	0.85–1.09	0.62
Parity		0.91	0.59–1.40	0.69
Marriage Age		1.03	0.92–1.11	0.79
Age of woman (years)		0.94	0.87–1.01	0.13
History of obesity during childhood				
Yes	29 (10.43)	2.10	0.77–5.68	0.14
No	249 (89.57)	1		
Family history of obesity				
Yes	93 (33.45)	1.78	0.92–3.47	0.08
No	185 (66.55)	1		
History of violence from family members during lifespan				
Yes	29 (10.43)	2.65	1.04–6.73	0.03
No	249 (89.57)	1		
Type of Delivery				
Vaginal	144 (51.80)	1.06	0.53–2.09	0.86
Caesarean	134 (48.20)	1		
Family Structure				
Extended	44 (15.83)	0.81	0.33–1.97	0.64
Nuclear	234 (84.17)	1		
Husband’s occupation				
Others	24 (8.63)	1		
Governmental	64 (23.00)	1.86	0.46–7.37	0.37
Business	165 (59.35)	0.93	0.27–3.18	0.91
Farmer	25 (8.99)	1.16	0.40–3.33	0.77
Housing				
Renter	60 (21.59)	1.85	0.88–3.88	0.10
House owner	218 (78.41)	1		
Place of residence				
Urban	115 (41.37)	1.27	0.68–2.35	0.44
Rural	163 (58.63)	1		
Any type of IPV				
Yes	214 (77.00)	1.02	0.56–2.57	0.62
No	64 (23.00)	1		

*Adjusted odds ratio

Table 3. Association between psychological intimate partner violence (IPV) alone and body mass index, controlling for socio-demographic and lifestyle variables, using multiple logistic regression (N=278)

Risk Factors	Number (%)	aOR*	95% CI	p-value
Total Household Income		1.00	1.00–1.00	0.77
Age of husband (years)		1.03	0.96–1.11	0.33
Educational status (years)		1.08	0.96–1.22	0.15
Husband's educational status (years)		0.97	0.85–1.09	0.75
Parity		0.90	0.59–1.39	0.95
Marriage Age		1.01	0.91–1.11	0.80
Age of woman (years)		0.94	0.87–1.01	0.12
History of obesity during childhood				
Yes	29 (10.4)	2.16	0.79–5.86	0.13
No	249 (89.6)	1		
Family history of obesity				
Yes	93 (33.5)	1.86	0.94–3.66	0.07
No	185 (66.5)	1		
History of violence from family members during lifespan				
Yes	29 (10.4)	2.92	1.15–7.43	0.02
No	249 (89.6)	1		
Type of Delivery				
Vaginal	144 (51.8)	1.07	0.54–2.11	0.84
Caesarean	134 (48.2)	1		
Family Structure				
Extended	44 (15.8)	0.74	0.31–1.76	0.50
Nuclear	234 (84.2)	1		
Husband’s occupation				
Governmental	64 (23.0)	1.67	0.41–6.75	0.47
Business	165 (59.4)	0.82	0.23–2.89	0.76
Farmer	25 (9.0)	1.04	0.35–3.06	0.93
Others	24 (8.6)	1		
Housing				
Renter	60 (21.6)	1.90	0.90–4.00	0.08
House owner	218 (78.4)	1		
Place of residence				
Urban	115 (41.4)	1.30	0.70–2.40	0.40
Rural	163 (58.6)	1		
Psychological IPV alone				
Yes	158 (56.8)	0.75	0.40–1.44	0.40
No	120 (43.2)	1		

* Adjusted odds ratio

The unexpected finding that higher education was associated with increased IPV risk contradicts earlier research conducted in Mazandaran's capital city (37). This paradoxical relationship may be attributed to cultural factors, as educated women may be more willing and able to recognize and disclose experiences of IPV (43). The discrepancy between our findings and previous local research may also reflect demographic differences, as the capital city of Mazandaran is more multicultural with diverse immigrant populations, while our study focused on a predominantly rural population with different socioeconomic and cultural dynamics.

Living in extended family structures emerged as another significant risk factor for IPV, consistent with studies from Pakistan (46) and Uganda (47). Extended family arrangements may create environments where conflicts over household responsibilities, privacy concerns, and interference from in-laws heighten stress levels and contribute to IPV occurrence (46). Additionally, the lower socioeconomic status commonly associated with extended family living situations may further increase IPV risk (43, 48, 49).

The strong association between lifetime violence history and current IPV risk supports the well-documented cycle of violence, as demonstrated in numerous global studies (42, 43, 50-53).

The obesity prevalence observed in our study (26.7%) is lower than rates reported in Brazil (30.1%) (21), Saudi Arabia (46.9%) (54), Egypt (48%) (24), and the USA / Europe (24%–40.8%) (55, 56). However, our findings align well with Iranian national estimates ranging from 12.6% to 25.9% (4).

Contrary to studies conducted in Egypt (24), Saudi Arabia (28), and the USA (1), our research found no significant association between IPV type and obesity. This absence of association may be attributed to cultural differences, variations in coping mechanisms, or differences in study populations and methodologies. Importantly, however, our findings did reveal that lifetime violence from family members was a significant predictor of obesity, supporting established research on the relationships between chronic stress and unhealthy behavioral patterns (23, 57).

Several limitations must be acknowledged in interpreting these findings. First, the sample was drawn exclusively from Mazandaran PHCs, which may not adequately represent Iran's diverse population across different geographic regions and socioeconomic strata, potentially limiting the generalizability of our results. Second, reliance on self-reported data introduces the possibility of recall bias and social desirability bias, which may affect the accuracy of IPV reporting and stress-related measures. Third, the cross-sectional design of this study precludes establishing causal relationships between variables. Fourth, small sample sizes for physical and sexual IPV categories prevented detailed regression analysis of these specific associations. Finally, unmeasured confounding variables, such as dietary habits, physical activity levels, genetic predisposition, and other lifestyle factors, may influence obesity outcomes and were not controlled for in our analysis.

Despite these limitations, this study possesses several notable strengths. These include a high response rate (70%), the use of validated WHO-IPV and PSS-14 questionnaires, and a comprehensive assessment of various IPV types and lifetime violence experiences. The study also provides valuable baseline data for understanding IPV and obesity relationships in the Iranian context, which has been understudied in this specific population.

Conclusions

While our study did not establish a significant association between IPV and obesity, the remarkably high prevalence rates of both obesity/overweight (74.3%) and IPV (71.4%) underscore the urgent need for comprehensive, multifaceted public health interventions. Both conditions represent critical public health challenges that require immediate, targeted prevention and intervention strategies from policymakers, healthcare providers, and community stakeholders.

The findings highlight several key areas for intervention and future research. First, efforts to improve women's socioeconomic status and empowerment may help reduce IPV risk. Second, the unexpected association between higher education and increased IPV risk warrants further investigation to understand the underlying mechanisms and develop appropriate interventions. Third, the high prevalence of both conditions calls for integrated screening and intervention programs in primary healthcare settings.

Healthcare providers should be trained to recognize and address both IPV and obesity as interconnected

health issues that may share common risk factors and consequences. Community-based interventions that address the social determinants of health, strengthen social support systems, and promote healthy coping mechanisms may be particularly effective in addressing both issues simultaneously.

Future research should employ longitudinal designs to establish causal relationships, include larger sample sizes to enable more detailed subgroup analyses, and incorporate additional variables such as dietary patterns, physical activity, and mental health outcomes. Additionally, qualitative research exploring the lived experiences of women affected by IPV and obesity could provide valuable insights for developing culturally appropriate interventions.

The public health implications of these findings extend beyond individual health outcomes to encompass broader societal concerns about gender-based violence, women's health, and healthcare system capacity. Addressing these challenges requires sustained commitment from multiple sectors and stakeholders to create environments where women can live free from violence and maintain optimal health outcomes.

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Conflicts of Interest

The authors declare no conflicts of interest.

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