Spatio-Temporal Patterns of Intimate Partner Violence Victimization and Preventive Measures among Married Persons in Imo State, South East Nigeria

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Abstract

The study investigated spatio-temporal patterns of intimate partner violence (IPV) victimization and preventive measures among married persons in Imo State, Nigeria. It adopted cross-sectional research design. The population consisted of 1,649,032 married persons in the study area. The sample size was 1,488 married persons drawn using multi-stage sampling procedure and purposive sampling technique. Questionnaire was used for data collection. Frequency, percentage, and binary logistic regression were used for data analyses. Findings reveal that married persons mostly experienced intimate partner violence in the home (23.4%), followed by public places (17.9%), and workplaces (15.4%). overall, married persons mostly experienced intimate partner violence in the morning (19.1%), followed by evening/night (14.9%), and afternoon (12.3%). Married persons indicated that all the proposed preventive measures for IPV were appropriate Gender, education level, place of residence, and length of marriage (p≤.05) were significantly associated with the patterns of various forms of intimate partner violence among married persons.

Keywords: Spatial, Temporal, gPattern, Intimate Partner Violence, Victimization, Preventive Measures

Introduction

Intimate partner violence (IPV) is a major social and public health problem that affects men and women across the globe regardless of their culture, religion and other demographic characteristics. It remains a public health and human rights issue, disproportionately affecting women (Benebo et al., 2018; Gilchrist *et al.*, 2022),

and over a quarter of women aged 15-49 years who have been in a relationship have been subjected to physical and sexual violence by their intimate partner at least once in their lifetime (since age 15) (World Health Organization [WHO], 2021). Although, numerous studies report that the preponderance of IPV is perpetrated by men, a growing number of

researchers and political activists claim that women and men are equally victimized (Archer, 2000). Traditional perspectives on IPV assumed that perpetrators were men trying to assert dominance. Typology researchers refuted this perspective, stating that although some violence is male-on-female, the majority are gender mutual.

Intimate partner violence is a social menace that is common in Africa with Nigeria being no exception. Intimate partner violence involves any behaviour by a spouse causing physical, sexual, stalking, sexual coercion, psychological abuse, financial abuse, and controlling behaviours by a current or former intimate partner, whether or not the partner is a spouse (Centers for Disease Control and Prevention [CDC], 2017; WHO, 2022). includes: Physical violence hitting, slapping, punching, choking, pushing, burning, injuries; sexual violence includes: any act, attempt to obtain a sexual act, or advances or otherwise directed against a person's sexuality using coercion by any person regardless of their relationship to the victim; and emotional violence includes: humiliation, economic deprivation, intimidation, stalking, extreme controlling behaviour, isolation, verbal abuse, and threats (WHO, 2013). However, this study focused on victims of IPV, and the victims are usually married persons. Moreover, married persons are partners or men and women who live together, and share both good and bad moments within a legal union in Imo State.

Intimate partner violence can manifest in different patterns. Spivak and Shannon (2015) described pattern as the various forms something may take place. However, pattern refers to regular and various ways married persons are victimized or perpetrate IPV against their partners as it relates to spatial, temporal, and demographic variations. Also, Global of Disease (GBD, differentiated pattern into three main forms of variations, namely: spatial, temporal, and demographic patterns. Spatial pattern refers to occurrence of IPV according to location, such as in the home, workplaces, and public places (streets etc) within Imo State. Temporal pattern refers to the time or period (morning, afternoon, evening, and night) when intimate partners (married persons) are victimized or are subjected to violence of all forms, while, demographic pattern refers to pattern of occurrence of IPV that could be attributed to environmental factors, such as gender, education level, place of residence, age, and length of marriage among others.

Intimate partner violence can be predicated by demographic (gender, education level, place of residence, age, and length of marriage etc) factors. A number of studies have focused on the possibility that the causes of violence are not the same for men and women. Perpetrators and victims of violence are however of both sexes. According to Oseni et al. (2022), IPV was significantly higher among women compared with men. Also, Ezenwoko et al. (2023) reported that men reciprocally women reported experiencing IPV during the lockdown period. Age has been implicated to be associated with IPV perpetration and victimization. Young age has consistently been found to be a risk factor for a man committing physical violence against a partner (Black et al., 2011). Individuals with greater education appear to less likely become victims or perpetrators of IPV. Abramsky et al. (2011) reported that completing secondary education has a protective effect on IPV risk, whereas primary education alone fails to confer similar benefits. Marital duration of more than 15 years seems to be a potential protective factor against male perpetration of IPV (Johnson & Das, 2009). Urban and rural residences are highly predictive of IPV (Antai & Antai, 2009; Jones & Ferguson, 2009).

Intimate partner violence victimization erode families by reducing productivity and household property. The negative consequences of IPV extend beyond partner's physical, sexual, and emotional reproductive health to their overall health; the welfare of their children; and the economic and social development of the nation. Consequences of IPV can be reduced or prevented by adopting some preventive measures. In this study, preventive measures refer to all measures or activities designed to reduce and prevent the occurrence of IPV among married persons. Seeking shelter counseling services, reporting to police, going for health services and seeking help from a health service provider are among preventive measures advocated (WHO, 2005).

While there have been global studies that documented the prevalence or magnitude of different forms of IPV, it has mainly been violence against women, and there has been little research prevalence of exposure to different forms of IPV, patterns, and preventive measures to mitigate its menace. Little is known about reciprocal violence with regards to its context and spatio-temporal patterns of occurrence. IPV is underreported by its victims for fear of reactions from partners or family members, and is handled with levity and triviality (Ezenwoko et al., 2023; WHO, 2013). In Imo State Nigeria, often times, married persons are seen battering

at various places and time resulting to frequent visitation of hospitals for treatment of injuries and psychological trauma emanating from IPV. However, temporal patterns spatial and preventive measures of IPV have not been examined among married persons (men and women) in Imo State. To fill this gap in the knowledge base, this study examined the spatio-temporal patterns of victimization and preventive measures in Imo State, Nigeria.

This study finding would provide valuable information for health care and public health professionals to implement effective IPV prevention. Married persons would find the results useful in making informed decision on matters of IPV patterns of occurrence that affect their healthy relationships with their partners and neighbours.

Objectives of the Study

The purpose of the study was to investigate the spatio-temporal patterns of intimate partner violence (IPV) victimization and preventive measures among married persons in Imo State, Nigeria Specifically, the study determined the:

- 1. spatial pattern of various forms of intimate partner violence among married persons;
- 2. temporal pattern of various forms of intimate partner violence among married persons; and
- preventive measures for intimate partner violence among married persons.

Hypothesis

 There is no significant association between the patterns of various forms of intimate partner violence and sociodemographic factors (gender, education level, place of residence,

age, and length of marriage) among married persons in Imo State, South East Nigeria (p≤.05).

Methodology

Design of the Study: The study adopted communities. This gave a total of 48 descriptive cross-sectional research design. **Area of the Study:** The study was conducted in the three Senatorial Districts (Imo East [Owerri zone], Imo West [Orlu zone], and Imo North [Okigwe zone]) that make up Imo State, South East, Nigeria. In Imo State Nigeria, IPV is underreported by its victims for fear of reactions from partners or family members, and is handled with levity and triviality (Ezenwoko et al., 2023; WHO, 2013). Little is known about reciprocal violence with regards to its context and spatio-temporal patterns of occurrence.

Population for the Study: The study

population comprised married persons in the study area. Married persons are men and women who are legally married. The projected population of married men and women is 1,649,032; comprising 830, 261 men and 818,771 women; which is 31.6% of the entire population in Imo State (National Population Commission, 2015). Only persons who were currently married were included in the study. Divorced, separated, cohabitating, and parents were not involved in the study. Sample for the Study: The sample size was 1,440 married persons. The sample size was determined using Cohen et al. (2011) Standardized Table for Random Samples, which states that when a population size is 1,000,000 or above at 95% confidence level (5% intervals), the sample size should be 384 or above. The multi-stage

sampling procedure was employed. Four

(2 urban & 2 rural) local government areas

(LGAs) were randomly selected from each

of the four Senatorial Districts, to give it a

total of 12 LGAs (6 urban & 6 rural). Two

communities were randomly drawn, each out of the 110 communities that made up the 12 drawn LGAs. This gave a total of 24 communities. Two villages were also randomly drawn from each of the villages. Finally, 30 married persons (15 men & 15 women) were drawn from each of the 48 villages, which gave a total of 1,440 respondents.

for Instrument Data Collection: Questionnaire was used for data collection. It consisted of 18 items classified into three parts. Part A sought information on demographic characteristics. Part B consisted six items (three items for spatial pattern and 3 items for temporal pattern) of various forms of IPV victimization. Part C consisted seven items on preventive measures of IPV. The questionnaire was validated by five experts from public health education, and was tested for internal consistency. Reliability indices of .82 and .77 were obtained for spatial pattern and temporal pattern scales respectively using Cronbach's alpha, while a reliability index of .79 was obtained for preventive measures scale using split half method (Spearman Brown Coefficent).

Data Collection Technique: Α total number of 1,440 copies of the questionnaire were administered to the spouses. Only 1,433 copies were returned, which gave a return rate of 99.5 per cent. Only 1,427 copies were however properly completed and used for analysis.

Data Analysis Technique: Frequency and percentage were used for analyses of the research questions. Binary logistic regression was used to assess the association between socio-demographic covariates and IPV victimization at .05 level of significance. The criterion for deciding an appropriately indicated preventive measure of IPV was cut off point of 50 per cent. Therefore, a percentage score that had less than 50 per cent was deemed not appropriate, while those that had 50 per cent or above were deemed appropriate. The null hypothesis

was tested using logistic regression at $p \le 0.05$.

Results

Table 1: Spatial Pattern of Various Forms of Intimate Partner Violence among Married Persons

S/N	Intimate Partner Violence Experience	F(%) _h	F(%) _w	F(%) _p	F (%) _n
1	Physical violence (e.g., slapping, choking,	330 (23.1)	307 (21.5)	204 (14.3)	586 (41.1)
	kicking, beaten up, threatened with weapons				
	etc)				
2	Sexual violence (e.g., forceful engagement in	241 (16.9)	143 (10.0)	217 (15.2)	826 (57.9)
	sexual intercourse without your consent,				
	rape, using physical violence and threats to				
	lure you into sexual intercourse, etc)				
3	Emotional violence (e.g., assault,	433 (30.3)	208 (14.6)	345 (24.2)	441 (30.9)
	humiliation, intimidation, threatening,				
	deprival of access to social amenities, family				
	members and friends, deprivation of basic				
	economic needs, prevention from resource				
	acquisition, neglect, ignoring, treating you				
	indifferently, calling you names, ridiculing				
	and criticizing you always in the public				
	places (street, health facilities, institutions,				
	restaurants, public transport, meeting places				
	etc)				
	Overall percentage	23.4	15.4	17.9	43.3

 $F(\%)_h = Home$; $F(\%)_w = Workplace$; F(%)p = Public Place; $F(\%)_n = None$

Table 1 shows that overall, married persons mostly experienced IPV in the home (23.4%), followed by public places (17.9%), and workplaces (15.4%). Also, the table shows that emotional violence (30.3%) and physical violence (23.1%) are

mostly experienced in the home. Furthermore, physical violence (21.5%) is mostly experienced in the workplaces, while emotional violence (24.2%) is mostly experienced in the public places.

Table 2: Temporal Pattern of Various Forms of Intimate Partner Violence among Married Persons

S/	Intimate Partner Violence Experience	F(%) ₁	$F(\%)_2$	F(%) ₃	F (%) ₄
N					
1	Physical violence (e.g., slapping, choking, kicking, beaten up, threatened with weapons etc)	218 (15.3)	142 (10.0)	202 (14.2)	865 (60.6)
2	Sexual violence (e.g., forceful engagement in sexual intercourse without your consent, rape, using physical violence and threats to lure you into sexual intercourse, etc)	174 (12.2)	137 (9.6)	157 (11.0)	959 (67.2)

Overall percentage

3 Emotional violence (e.g., assault, humiliation, intimidation, threatening, deprival of access to social amenities, family members and friends, deprivation of basic economic needs, prevention from resource acquisition, neglect, ignoring, treating you indifferently, calling you names, ridiculing and criticizing you always in the public places (street, health facilities, institutions, restaurants, public transport, meeting places etc)

427 (29.9) 249 (17.4) 280 (19.6) 471 (33.0)

14.9

53.6

12.3

 $F(\%)_1 = Morning; F(\%)_2 = Afternoon; F(\%)_3 = Evening/Night; F(\%)_4 = None$

Table 2 shows that overall, married persons mostly experienced IPV in the morning (19.1%), followed by evening/night (14.9%), and afternoon (12.3%). Also, the table shows that emotional violence is mostly experienced in the morning (29.9%); followed by

evening/night (19.6%). Furthermore, physical violence is mostly experienced in the morning (15.3%); followed by evening/night (14.2%), while sexual violence is mostly experienced in the morning (12.2%); followed by evening/night (11.0%).

Table 3: Preventive Measures for Intimate Partner Violence among Married Persons (*n*=1,427)

19.1

S/N	Spousal Violence Indicators	F(%)
1	Preventive measures, such as providing shelter for the victims, reporting	1075 (75.3)
	cases of abuse to the law enforcement agencies, holding abusers responsible	
	for their actions etc.	
2	Providing guidance and counseling and support for victims at various sites	839 (58.8)
3	Education and enlightenment, such as training everyone in non-violent	959 (67.2)
	conflict resolution through family life education, reduction in the amount	
	of imagery on TV and home videos, Campaigns to raise awareness about	
	dangers of violence etc.	
4	Developing good communication skills while relating with my partner, and	987 (69.2)
	avoiding verbal abuse such as name calling	
5	Providing financial support for victims of violence, and allowing partner to	753 (52.8)
	acquire resources	
6	Teaching conflict resolution and social skills at schools	723 (50.7)
7	Changing social and cultural gender norms through media awareness	871 (61.0)
	campaigns	. ,
	Overall percentage	62.1

Table 3 shows that overall, 62.1 per cent of the married persons indicated that all the proposed preventive measures for intimate partner violence were appropriate.

Table 4: Binary Logistic Regression of Patterns of Intimate Partner Violence and Sociodemographic Covariates

uemographic Covariates						
Variables	n(%)	COR	p	AOR	p	
Gender						
Male	708 (49.6)	-	-	-	-	
Female	719 (50.4)	8.568	.042	1.543*	.024	
Education Level						
No Formal Education	116 (8.1)	-	-	-	-	
Primary Education	177 (12.4)	.352	.000	.363***	.000	
Secondary Education	408 (28.6)	.193	.000	.197***	.000	
Tertiary Education	726 (50.9)	.058	.000	.056***	.000	
Place of Residence						
Rural	735 (51.5)	-	-	-	-	
Urban	692 (48.5)	.867	.198	1.283*	.047	
Age						
18-43 years	753 (52.8)	-	-	-	-	
44+ years	674 (47.2)	1.328	.010	.986	.930	
Length of Marriage						
< 10 years	581 (40.7)	-	-	-	-	
10-24 years	494 (34.6)	1.494	.002	1.408*	.025	
25+ years	352 (24.7)	1.706	.000	1.361	.130	

 $COR = Crude \ Odds \ Ratio, \ AOR = Adjusted \ Odds \ Ratio; *p < 0.05; **p < 0.01; ***p < 0.001$ Reference Groups: Gender = Male; Education Level = No Formal Education; Place of Residence = Rural; Age = 18-43 years; Length of Marriage = < 10 years

Table 4 shows that gender, education level, place of residence, and length of marriage were significantly associated with the patterns of various forms of IPV among married persons in Imo State, South East Nigeria. In a multivariate analysis, female partners workers had 54.3% higher likelihood to be victimized in various patterns than the male partners (AOR = 1.543, p<.05). Partners with primary (AOR = .363, p<.001), secondary (AOR = .197, p < .001), and tertiary (AOR = .197, p < .001).056, p<.001) education had 63.7%, 80.3%, and 94.4% respectively lesser likelihood to experience various forms of IPV than those with no formal education. Partners residing in the urban setting had 28.3% higher likelihood to experience various forms of IPV victimization than those residing in rural setting (AOR = 1.283, p<.05). Partners that have spent 10-24 years in marriage had 40.8% higher likelihood to experience various forms of

IPV than those that have spent < 10 years in marriage (AOR = 1.408, p<.05).

Discussion

Married persons mostly experienced IPV in the home, followed by public places, and workplaces. Also, the table shows that emotional violence and physical violence are mostly experienced in the home. Furthermore, physical violence is mostly experienced in the workplaces, while emotional violence is mostly experienced in the public places (Table 1). These findings were expected and therefore not surprising, because various forms of IPV occur in diverse geographical settings. The finding that various forms of IPV mostly occurred at home was expected and therefore not surprising, because it was in line with Salari (2007) who reported that the most dangerous setting for IPV was the home or to be victimized repeatedly. The finding was consistent with the WHO (2005) who found that majority of IPV takes place in the privacy of the home; and Ediomo-Ubong and Iboro (2010) who reported that the family is the hot bed for IPV, and that most forms of IPV take place in the family space. The commonly held perception is that home is a place of safety or refuge for people other than a place for perpetration or experience of violence.

The finding that various forms of IPV occurred in the workplace was expected and therefore not surprising, because it was in line with Elserberg and Mcbohirter (1999) who reported that 75 per cent of battered partners are harassed in their work settings by their abusers. The findings could be attributed to the fact that intimate partners mostly stay together at home and regularly visit each other in the workplace. The report that sexual violence mostly occurred at home more than other places was expected and therefore not surprising. Violence at home or any geographical location may disrupt child development and encourage perpetration of violence by those who witnessed it. The findings have implications understanding the dynamics of IPV by trained clinicians, social workers and counselors.

Married persons mostly experienced IPV in the morning, followed evening/night, and afternoon. Also, the table shows that emotional violence is mostly experienced in the morning; followed by evening/night. Furthermore, physical violence is mostly experienced in the morning; followed by evening/night, sexual violence is mostly experienced in the morning; followed by evening/night (Table 2). These findings expected and therefore surprising, because various forms of IPV among married persons can take place during any time or period of the day. The findings were in line with Roger (2013) who found that in Uganda, most of the women had experienced IPV at least once in their lifetime, in the past year, with experiences of sexual IPV, physical IPV, and verbal IPV; and Porder et al. (2009) and Spivak and Shannon (2015) who reported that temporal pattern is used to answer questions about the state of information in the previous times or past years. The finding that temporal IPV only occur mostly in the morning was unexpected and surprising because the report of occurrence of the various form of IPV would have been mostly at night because it is the time partners are back home to relate with each other more than other times of the day.

Married persons indicated that all the proposed preventive measures for IPV were appropriate (Table 3). These findings were expected and therefore surprising as prevention of public health problems is achieved through application of certain measures protective factors. These preventive were consistent with measures intervention strategies against designed by WHO (2005) and Harvey et al. (2007) which included seeking shelter or counseling services, reporting to police, going for health services, attending programmes that educate about family violence, supporting further research collaborations causes of IPV. establishing, implementing, monitoring action plans to address violence by intimate partners among others. Α public health approach emphasizes the primary prevention of IPV, which is stopping them from occurring in the first place. This implies reducing the number of new instances of IPV or by intervening before any violence occurs.

Gender, education level, place of residence, and length of marriage except age were significantly associated with the patterns of various forms of IPV among married persons in Imo State (Table 4). Female partners had higher likelihood to be victimized in various patterns than the male partners. Partners with primary, secondary, and tertiary education had lesser likelihood to experience various forms of IPV victimization than those with no formal education. Partners residing in the urban setting had higher likelihood to forms experience various of **IPV** victimization than those residing in the rural setting. Partners that have spent 10-24 years in marriage had higher likelihood to experience various forms of IPV victimization than those that have spent < 10 years in marriage. The finding on gender was unexpected and therefore surprising as one would expect females to experience higher rates of IPV than their male counterparts conventionally. The finding was consistent with Hines and Douglas (2010) who found that men experienced more psychological, sexual, physical violence including sustaining injuries than women, as female partners of men in the help seeking physical sample used more IPV, controlling behaviours, and severe psychological aggression than their male partners in the community sample. Also, the finding conforms to Machado et al. (2016), Oseni et al. (2022), and Ezenwoko et al. (2023) who found that a large body of research clearly indicates that men and women are victims of IPV. This finding is somewhat in line with the perspectives of the family violence theorists that men and women are violent at near equal rates. The finding on education level was expected and surprising. The finding is consistent with the findings of Jones and Ferguson (2009), Abramsky et al. (2011), and Black et al. (2011) that education level is associated with IPV occurrence in various forms and patterns. This finding may result in developing initiatives to improve access to higher education and in expanding educational opportunities for married persons.

The finding on place of residence are unexpected and therefore surprising as one would expect IPV to occur more in the urban areas due to overcrowding and influx of commercial activities. finding is consistent with Jones and Ferguson (2009) who found that urban residence is highly predictive of IPV, and that rural residence decreases the odds of IPV. Furthermore, the finding was not consistent with Antai and Antai (2009) who found that rural residence was associated with higher risk of IPV among the women in the Niger Delta of Nigeria. The finding on age was unexpected and therefore surprising as age especially younger age is conventionally expected to contribute to IPV experience. The finding was not consistent with the findings of Black et al. (2011), Abramsky et al. (2011), and Trotman (2013) that age increased the risk of IPV. The finding on length of marriage was unexpected and therefore surprising as the researcher expected length of marriage, especially marriages that have lasted over 10 years to act as protective factor against IPV experience other than recent marriages. Also, the findings were consistent with Trotman (2013) who reported that length of relationship variable did not significantly predict experience of physical, emotional, and sexual violence. However, findings supported the assertion of Johnson and Das (2009) that marital duration of more than 15 years seems to be a potential protective factor against male perpetration of IPV.

The findings of this study have important implications for health care and public health professionals. Public health awareness and prevention programmes would be used to mitigate the occurrence of IPV in various patterns, and emphasize the potential detrimental interpersonal effects of IPV occurrence. The findings have implication for making informed decision and policies on matters of IPV that affect relationship with people or partners.

There are some limitations that should be noted of this study. First, measures assessed using participant reports about their experiences of violence are thus subjected to recall bias and reporting bias. Second, there is the potential for unmeasured confounders that may influence the relationships between the key variables under study.

Conclusion

The findings of this study showed that persons were married victimized physically, sexually, and emotionally mostly in the home, public places and in the morning hours in Imo State, Nigeria. education level, Gender, place residence, and length of marriage are very important factors considered in dealing with IPV victimization among married persons.

Recommendations

- 1. Government and religious bodies should organize public programmes to enlighten married persons on various forms of IPV, where and when they occur most, and its possible preventive measures.
- 2. Government at all levels should strengthen the implementation of

- legal sanctions and policy frameworks to mitigate high rate of bidirectional intimate partner violence.
- 3. Public awareness and education campaigns that address intimate partner violence should be gender inclusive.

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