

Intimate Partner Violence Among Pregnant Women in Addis Ababa, Ethiopia, 2021

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Abstract

Background

Intimate partner violence (IPV) continues to be a challenge in the 21st century. IPV is social problem stipulated with many sectors and affecting at multiple levels. The aim of the study was to determine magnitude and associated factors of intimate partner violence during pregnancy at selected hospitals in Addis Ababa.

Methods

Multicenter cross sectional study conducted. Four hundred twenty pregnant women attending Antenatal care selected from the hospitals in proportion to their client load from April 2021- May 2021. Data collected using modified standard questionnaire for IPV. Data analyzed using SPSS version 25. Descriptive statistics and multivariate binary logistic regression computed. Statistical testes were considered significant when $P < 0.05$.

Result

The magnitude of intimate partner violence in pregnancy was 48.6%. Women with no formal education (AOR = 7.73, CI = 2.18, 27.38), lack of occupation in women (AOR = 2.82, CI = 1.39, 5.69), intimate partners with primary education (AOR = 3.62, CI = 1.36, 9.66), intimate partner alcohol consumption (AOR = 4.45, CI = 2.34, 8.47), lack of financial freedom(AOR = 10.58,CI = 5.03, 22.24) and unplanned pregnancy (AOR = 6.78, CI = 3.76, 12.23) were factors associated with intimate partner violence towards pregnant women.

Conclusion

Almost one in two women studied were victims of some form of intimate partner violence during pregnancy. Lower educational status, intimate partner alcohol consumption, lack of economic freedom as well as unemployment and unplanned pregnancy were associated with

Introduction

Intimate partner violence refers to various forms of assault by intimate partner that include physical, sexual and emotional abuse. These have been referred as domestic violence in some countries, which is more broad form of violence at household level. Intimate partner violence (IPV) occurs in all settings and among all socioeconomic, religious and cultural groups[1].

Around the globe, different studies found IPV during pregnancy at substantial levels. A wide ranging prevalence report from 1% in urban Japan to 28% in provincial Peru was reported in WHO study[2].

Intimate partner violence is prevalent ranging from 2–13.5% according to a study review in different countries. [3]. An even higher IPV prevalence up to 40% was reported in some African countries [4]. Studies done on IPV during pregnancy has implicated adverse outcomes such as miscarriage, late entry into prenatal care, stillbirth, premature labor and birth, fetal injury and low-birth-weight or small-for-gestational-age infants [1, 3, 4]. Other consequences are also apparent on pregnant women as it is demonstrated in non-pregnant women. This includes injury and physical health impairment, mental health impairment and suicide, impaired sexual life and reproductive health, homicide, negative social and health consequences on children[1].

IPV has been studied and the ecological model widely employed to understand the leading factors. Violence is expressed a consequence of complex interaction of many factors operating at multiple levels in a society. These factors have been reflected in different studies with contextual variation.(e.g. between rural and urban settings)[1]. Though studies have been done to better understand IPV from burden to factors to burden in population there is still more exploration needed in our understanding of IPV in different population.

The studies done in Ethiopia in some districts show significant burden of the problem. In 2018, a meta-analysis that included eight studies reported a pooled prevalence of 26.1% with highest prevalence in Oromia followed by Amhara region[6]. Other individual studies have reported varying prevalence reports. In 2014, a cross sectional study in Hossana, reported IPV during pregnancy of 23% [9]while in the same year a cross sectional study in west Shewa, Oromia found IPV during pregnancy to be 64%[8]. Another cross sectional study in 2018 in Debre Markos, Amhara region reported prevalence of 41.1%[7] and in the same year almost similar finding(46.4%) was reported from cross sectional study in east gojjam[10]. The aim of this study was to assess the magnitude and factors associated with IPV among pregnant women attending ANC at SPHMMC and affiliate hospitals. This will help in objective understanding of the burden of IPV in the urban Ethiopia.

Methods And Materials

Study area

The study was conducted in St. Paul millennium hospital medical college and affiliate hospitals in Addis Ababa, Ethiopia. The hospital has one of the largest maternity center in the country. It provides ANC service with an average of 1500 mothers per month. SPHMMC has affiliates with three hospitals in Addis Ababa for obstetrics and gynecology services. These hospitals are RDDMH (Ras Desta Damtew Memorial Hospital), Abebech Gobena mothers and children Hospital (AGMCH) and Minilik II referral hospital. Their monthly client flow at ANC averages to 500,750,550 clients respectively.

Study design

Multicenter prospective analytic Cross sectional study was conducted. All pregnant women above 28 weeks of gestation (Estimated fetal weight (EFW) above 1KG if unknown date) attending ANC in the

study hospitals, included in the study after fulfilling the inclusion criteria, and randomly selected.

Inclusion and Exclusion criteria

Inclusion criteria

- All pregnant women above 28 weeks of gestation (EFW > 1kg if unknown date) attending ANC in the selected hospitals and live with their partner in the past 06 months.

Exclusion criteria

- Pregnant women who have not lived with their partner in the past 06 months.
- Pregnant women whose gestational age is below 28 weeks/ estimated fetal weight < 1kg for unknown date.
- Acute onset psychiatric conditions and critically ill patients who are unable to communicate.

Sample size determination and sampling procedure

Sample size was calculated using single population formula, where z is the normal standard deviation set at 1.96, with a confidence level specified at 95% and a tolerable margin of error (d) at 5%, considering 10% nonresponse rate and prevalence of violence (p) 46.1% from a previous similar study in Debre Markos, Ethiopia. The total sample size after considering 10% non-response rate is 420. Based on pre-determined sample size, probability proportional to size (PPS) sampling employed to allocate number of participants in each of the respective hospitals.

Data collection tools and procedures

The standard WHO multicountry study questionnaire for assessing women's health and violence was used for data collection as modified to fit local setting in previous studies. The questionnaire had four items for psychological violence, five items for physical violence, and three items for sexual violence, and the response to each item was either "Yes" or "No." Participants who respond "Yes" to one or more items of violence during recent pregnancy were incident cases of intimate partner violence victimization [2]. The adopted questionnaire was assessed among 5% of the total sample size before the actual data collection. Data collected by ten midwives (all females, which enable better rapport with better disclosure from study participants). The principal investigator supervised the data collection procedures. Training given for two days regarding interviewing techniques, the purpose of the study, the importance of privacy, discipline and approach to the interviewees, and confidentiality of the respondents. The investigator assessed collected data weekly for consistency, completeness and double entry of data.

Data processing and analysis

Data entry achieved using Epi-info version 7.1. The raw data then exported into SPSS version 25 for analysis. Descriptive statistical analyses computed to describe the characteristics of

participants/partners. Then, information presented using tables and figures. Bivariate analysis carried out to see the association of each independent variable with the outcome variable (IPV). Variables with p value <0.2 in the bivariate analysis transferred in to multivariate analysis model. Odds ratios with 95% CI reported to show the relation pattern among variables. Variables with p values less than 0.05 were taken to be significantly associated.

Study variables

Dependent variable:

- Intimate partner violence (IPV)

Independent variables

Socio-demographic and socio-economic characteristics, intimate partner related factors, family related factors, pregnancy and reproductive history of the participants are predictors included for assessment of any association.

Data quality control

Training was given to data collectors on the purpose of the study and data collection process. Revision of the collected data and checking for the completeness before data entry was done. Pretest among (5%) of the sample prior to the actual data collection carried out to test the accuracy of the questionnaire to collect the intended data.

Operational definition

Intimate partner violence (IPV): A study participants who responds at least one YES response for the Likert Scale (sometimes, usually, and always) among thirteen items (five item for Psychological/emotional, five for physical, and three items for sexual) qualifies the respondent as victim for IPV[2].

Psychological or emotional violence: at least one YES response for the Likert Scale (sometimes, usually, and always) among five items for psychological violence qualifies the respondent for being faced with psychological/ emotional violence[2].

Physical violence (beating): at least one YES response for the Likert Scale (sometimes, usually, and always) among five items for physical violence qualifies the respondent for being faced with physical violence[2].

Sexual Violence: at least one YES response for the Likert Scale (sometimes, usually and always) among three items for sexual violence qualifies the respondent for being faced with sexual violence[2].

Results

Socio-demographic characteristics of the pregnant women and partner

Four hundred twenty pregnant women were involved in this study, yielding a response rate of 100%. About 273 (65%) pregnant women were between 25–34 years, and the mean age was 28.84 years (SD ± 4.31). The majority of pregnant women (258; 61.4%) were Orthodox Christian, 121 (28.80%) were Muslim and 39(9.3%) were Protestant. The majority of respondents (402(95.7%) were married and 12(2.9%) were divorced.

The majority of respondents had primary level 121(28.8%) and secondary level 134(31.9) education (Table 1). Among the 420 study participants 252 (60%) had no formal occupation and the majority are homemakers. More than half 245(58.3%) of the respondents do not have their own income and their main income source is their husband (partner).

Table 1
Socio Demographic Characteristics of Pregnant Women Attending ANC in SPHMMC and affiliated hospitals, Addis Ababa, Ethiopia, 2021

Characteristics		Frequency	Percent
Age	15–24	104	24.8
	25–34	273	65.0
	> 34	43	10.2
	Total	420	100.0
Religion	Orthodox	258	61.4
	Muslim	121	28.8
	Protestant	39	9.3
	Other	2	0.5
	Total	420	100.0
Marital status	Singleton	5	1.2
	Married	402	95.7
	Divorced	12	2.9
	Separated	1	0.2
	Total	420	100.0
Educational status	Illiterate	73	17.4
	Primary level(Grade 1–6)	121	28.8
	Secondary level(Grade 7–12)	134	31.9
	Above secondary level	92	21.9
	Total	420	100.0
Occupation	Unemployed	252	60.0
	Employed(Gov, NGO, Selfemployed)	162	38.6
	Student	6	1.4
	Total	420	100.0
Income	0	245	60.0
	< 2500	38	38.6
	> 2500	137	1.4
	Total	420	100.0

Characteristics		Frequency	Percent
Income source	My self	161	38.3
	My husband	249	59.3
	My family(parents, brother, sister, other family)	5	1.2
	NGO aid	3	0.7
	None	2	0.5
	Total	420	100.0
Economic freedom	Yes	304	72.4
	No	116	27.6
	Total	420	100.0

Two hundred twenty two (52.9%) of the intimate partners were between 20–34 and 178(42.4%) were between 35–44 years. About seventy percent of intimate partners had secondary level 142 (33.8%) and higher 155 (36.9%) educational status. Almost all intimate partners of respondents 408(97.1%) were reported to have some form of occupation with 314(74.5%) earning more than 2500 ETB. The mean monthly income among their partners was 4587.09 ETB (Table 2).

Behavioral Pattern/Social Habits of the Respondents

Alcohol drinking and Khat use habit is not predominant among the respondents and majority of the respondents have never consumed alcohol 386 (91.9%) or khat 416(99.0%) during index pregnancy. One hundred thirty four (31.9%) of the intimate partners of respondents have been reported to use alcohol at different frequency and about 64(15.2%) use khat. Among the partners 34(8.1%) were found to have smoking habits.

Table 2
Behavioral pattern of pregnant women and their partners Attending Antenatal Care in SPHMMC and affiliated hospitals, Addis Ababa, Ethiopia, 2021

Characteristic		Frequency	Percentage
Alcohol use	User	33	7.9
	Non user	386	91.9
	Unwilling to answer	1	0.2
	Total	420	100.0
Khat use	User	3	0.7
	Non user	416	99.0
	Unwilling to answer	1	0.2
	Total	420	100.0
Partner Alcohol use	User	134	31.9
	Non user	285	67.9
	Unwilling to answer	1	0.2
	Total	420	100.0
Partner Khat use	User	64	15.2
	Non user	351	83.6
	Unwilling to answer	5	1.2
	Total	420	100.0
Smoking	Yes	34	8.1
	No	386	91.9
	Total	420	100.0

Reproductive characteristics of pregnant women

The mean gravidity and parity of respondents were 2.9 (SD ± 1.89) and 1.8 (SD ± 1.60) respectively. Among the respondents, 136 (32.4%) were reported to be nulliparous and 46(11%) of the respondents had history of abortion. From the total respondents 166 (39.5%) stated the pregnancy was unplanned while almost all pregnancies were stated to be wanted.

Prevalence of intimate partner physical violence during current pregnancy

The prevalence of IPV during the current pregnancy was 48.6% (Table 3). Among the study hospitals, the prevalence of IPV was highest in Yek-12 MH 53(49.5%) in and lowest in RDDMH 28(47.5%) in Hospital (Table 4).

Among those reported with IPV, psychological violence 197 (46.9%) was the most common type and physical violence 97(23.1%) was the lowest following sexual type of violence 161(38.3%). This kind of pattern was seen in each hospital. Among the psychological violence humiliation and insult were the most common. Unwillful sexual activities were the most reported and forced sexual intercourse was the least in this group of violence. Among those who reported physical violence, being, slapped was the most common and the use of weapons (knife, Gun) was the least.

Table 3
Prevalence of IPV among pregnant Women Attending Antenatal
Care in SPHMMC and affiliated hospitals, Addis Ababa,
Ethiopia, 2021

Characteristic		Frequency	Percentage
Psychological violence	No	223	53.1
	Yes	197	46.9
	Total	420	100.0
Physical violence	No	323	76.9
	Yes	97	23.1
	Total	420	100.0
Sexual violence	No	259	61.7
	Yes	161	38.3
	Total	420	100.0
IPV	No	216	51.4
	Yes	204	48.6
	Total	420	100.0

Table 4

Prevalence of IPV and its components among pregnant Women Attending Antenatal Care in SPHMMC and affiliated hospitals, Addis Ababa, Ethiopia, 2021

Characteristic		SPHMMC	AGMCH	RDDMH	MIIH
		Number (%)	Number (%)	Number (%)	Number (%)
Psychological violence	No	99(53.2)	58(54.2)	31(52.5)	35(51.5)
	Yes	87(46.8)	49(45.8)	28(47.5)	33(48.5)
Physical violence	No	145(78)	79(73.8)	49(83.1)	50(73.5)
	Yes	41(22)	28(26.2)	10(16.9)	18(26.5)
Sexual violence	No	115(61.8)	62(57.9)	39(66.1)	43(63.2)
	Yes	71(38.2)	45(42.1)	20(33.9)	25(36.8)
IPV	No	96(51.6)	54(50.5)	31(52.5)	35(51.5)
	Yes	90(48.4)	53(49.5)	28(47.5)	33(48.5)

Factors associated with IPPV during the current pregnancy

The study showed women's age, women's educational status, women's occupation status, women's income and income source, Women's financial freedom, intimate partner's education, intimate partner's alcohol consumption, intimate partners' khat consumption, Smoking habit, and whether pregnancy was unplanned to be associated with IPV in the current pregnancy in the binary regression analysis. In the multivariable analysis, women's educational level, women's financial freedom, intimate partners' educational level and intimate partner's alcohol consumption, unplanned pregnancy were significantly associated with IPV during the current pregnancy. The model was found fit with Hosmer-Lemeshow goodness of fit test ($p = 0.541$). Women with no formal education were 7.73 times more likely to face IPPV during pregnancy (AOR = 7.73, CI = 2.18, 27.40) than those with primary school education or greater (AOR = 3.50, 95% CI = 1.18, 10.35) (Table 5).

Partners with Primary level education were 3.62 times more likely to result IPV to their wives compared to those who have higher education. (AOR = 3.62, CI = 1.36, 9.66) Pregnant women who have some form of occupation were 2.8 times less likely to experience IPPV. (AOR = 2.80, CI = 1.40, 5.69) In addition, women with financial freedom are more than 10 times less likely to face IPV during their pregnancy (AOR = 10.58, CI = 5.03, 22.24). Pregnant women whose partner consumes alcohol are more than four times likely to experience IPV (AOR = 4.45, CI = 2.34, 8.47).

At last, those women who are having unplanned pregnancy were more than six times likely to experience IPV (AOR = 6.78, CI = 3.76, 12.23).

Table 5

Binary logistic regression analysis of factors affecting IPV among pregnant women attending antenatal care at SPHMMC and affiliated hospitals, Addis Ababa, 2021

Variables	No	Yes	COR(95%CI)	AOR(95%CI)
	Number (%)	Number (%)		
Age <25 years	56(53.8)	48(46.2)	1	
25–34 years	143(52.4)	130(47.6)	1.06(0.67,1.67)	
≥ 35 years	17(39.5)	26(60.5)	1.78(0.87,3.68)	
Educational status No formal education	13(17.8)	60(82.2)	21.92(9.79,49.10)	7.73(2.18,27.38)**
Primary	43(35.5)	78(64.5)	8.62(4.48,16.59)	3.50(1.18,10.35)*
Secondary	84(62.7)	50(37.3)	2.83(1.49,5.38)	1.47(0.57,3.83)
Higher	76(82.6)	16(17.4)	1	1
Educational status No formal education	6(27.3)	16(72.7)	5.94(2.19,16.13)	1.02(0.21,4.97)
Partner Primary	25(24.8)	76(75.2)	6.78(3.85,11.93)	3.62(1.36,9.66)*
Secondary	78(54.9)	64(45.1)	1.83(1.14,2.94)	1.21(0.57,2.57)
Higher	107(69.0)	48(31.0)	1	1
Occupation Unemployed	110(42.6)	148(57.4)	2.55(1.70,3.83)	2.82(1.39,5.69)**
Employed	106(65.4)	56(34.6)	1	1
Income 0	106(43.3)	139(56.7)	2.68(1.73,4.15)	
<2500	18(47.4)	20(52.6)	2.27(1.10,4.71)	
≥ 2500	92(67.2)	45(32.8)	1	
Income partner 0	3(25.0)	9(75)	3.85(1.02,14.51)	
<2500	37(38.9)	58(61.1)	2.01(1.26,3.22)	
≥ 2500	176(56.2)	137(43.8)	1	
Income source Myself	104(64.6)	57(35.4)	1	
My Husband/Other	112(43.2)	147(56.8)	2.40(1.60,3.59)	
Financial freedom Yes	198(65.1)	106(34.9)	1	1
No	18(15.5)	98(84.5)	10.17(5.84,17.72)	10.58(5.03,22.24)**

*P value < 0.05, **P value < 0.005

Variables	No	Yes	COR(95%CI)	AOR(95%CI)
	Number (%)	Number (%)		
Alcohol use partner User Non-user	35(26.1)	99(73.9)	4.92(3.12,7.76)	4.45(2.34,8.47)**
	181(63.5)	104(36.5)	1	1
Chat/khat use User Non-user	10(15.6)	54(84.4)	7.67(3.78,15.56)	
	206(58.7)	145(41.3)	1	
Smoking Yes	2(5.9)	32(94.1)	19.91(4.70,84.24)	
	No	214(55.4)	172(44.6)	1
Pregnancy planning Yes	185(72.8)	69(27.2)	1	1
	No	31(18.7)	135(81.3)	11.68(7.24,18.84)
*P value < 0.05, **P value < 0.005				

Discussion

Prevalence of IPV

Among 420 pregnant women included in the study from the four study hospitals, the prevalence of IPV during the index pregnancy was 204(48.6%). The proportion of different types of IPV showed similar pattern in the study hospitals.

These findings are similar to the study conducted among pregnant women in Debre Markos town, North West Ethiopia with prevalence of 41.1% [7] in east gojjam Ethiopia (46.4%) [23]. In addition, the findings are similar to the report on IPV among pregnant women in St. Paul hospital (49.1%) [26]. A systemic review of Africa studies on IPV against pregnant women reported the overall prevalence of intimate partner violence during pregnancy ranged from 2.3% to 57.1% [29]. Furthermore, the prevalence of IPV in this study was lower than the lifetime prevalence of IPV in Ethiopia (60.6%), and low and lower-middle income countries (55.8%) [24, 25]. This can be due to similar methodology employed in a similar urban setting. Yet there are reports of lower prevalence in a metanalysis of 8 studies done in Ethiopia that resulted pooled prevalence of 26.1%(CI:20,32.3) [6]. This finding is in contrary to the systematic review of about 15 community based studies on prevalence of IPV among women with a prevalence report more than 50% up to 78% [28]. The variance in the prevalence of IPV among pregnant women in different studies could be due to the uncontrolled variance in the environment created during data collection from participants.

The findings of this study during current pregnancy with respect to psychological, physical, and sexual violence is higher compared to the study conducted in Bale zone, Southeast Ethiopia. That is

psychological (33.0%), physical (20.0%) and sexual (36.3%) [22]. In addition, the study in Debre Markos has lower proportion of the different types of violence even if there is comparable prevalence of IPV in general [7]. Systematic review of African studies on IPV during pregnancy reported similar prevalence rates of 23% to 40% for physical, 3% to 27% for sexual and 25% to 49% for emotional intimate partner violence during pregnancy [28]. In the index pregnancy the findings showed that 97(23.1%) physical violence. Similarly, the WHO multi-country study on women's health and domestic violence against women found the prevalence of physical intimate partner violence in pregnancy to range between 1% in Japan city to 28% in Peru Province, with the majority of sites ranging between 4% and 12% [11]. This could be due to the variance in the utilization of data collection tool and factors related to participants' environment such as culture, social norm.

Factors Associated with IPV during pregnancy

Low level of women's education was highly associated with IPV and the relation is strongest in those with no formal education. This finding is in coherence with studies done elsewhere in the world. [13] This can be due to the advantage of having education in the better awareness about their rights and ability to maintain balanced relation with their partner.

Although, in this study the response rate in the uneducated group is low and the association is difficult to ascertain. Partners with primary level education were 3.6 times more likely to use violence against their intimate partners during recent pregnancy (AOR = 3.62, CI: 1.36, 9.66). This is coherent with studies conducted in Hossana, Ethiopia [9], which revealed partner who attended tertiary education is protective against intimate partner violence during pregnancy. This can be explained by the fact education allows better understanding of women's rights and legal implications as well as the ability to refrain from unhealthy norms of the society.

Those pregnant women who have no employment or occupation were almost three times at risk to be a victim of IPV than pregnant women with some form of occupation (government, NGO, other) (AOR = 2.82, CI= (1.39, 5.69). Occupational status reported to have no significant association with intimate partner violence in the study in Debre Markos, Ethiopia [7]. The importance of occupation in this study in Addis Ababa might be due to the link that having a job has with having decision-making ability in the household and ability to demand respect from the society as well as the intimate partner.

According to this study finding, pregnant women who do not have financial freedom are more than 10 times likely to experience IPV compared to those who have financial freedom (AOR = 10.58, CI = (5.03, 22.24). Similar finding was reported in a study done in Uganda [27]. Husband making decision alone in household matters had a seven times (COR = 6.7, 95%CI, 2.3, 23.3) increased likelihood of IPV perpetration compared to shared decision-making [23]. These were also substantiated in another study in Ethiopia [25]. The association of occupation and financial freedom with IPV explains that financially capable women are likely to have lower tolerance for IPV as they can make their living on their own.

In this study, pregnant women whose partners drink alcohol were 4.45 times (AOR = 4.45 CI= (2.34, 8.47) more likely to experience IPV during pregnancy by their husbands/partners compared with those pregnant women whose partners rarely drink alcohol (less than or equal to one times per month). These findings are supported by studies conducted in Arua, Uganda [27], and in Ethiopia [21]. This is well explained with the established stimulatory effect of alcohol and escalating effect towards aggressive behaviors.

There is strong association between IPV prevalence and unplanned pregnancy in this study. Such pregnancies are likely result of unstable relationship or family condition. It can also be result of IPV by itself. Such association was also reported else were in Ethiopia. [26]. This is probably due to fear of taking the responsibility to care for both the mother and the newly coming child. In addition, the unplanned pregnancy might be result of sexual violence.

Abbreviations

AGMCH

Abebech Gobena Mothers and children Hospital

ANC

Antenatal care

CSA

Central statistics agency

EDHS

Ethiopian demographic health survey

IPV

Intimate partner violence

IRB

Institutional review board

MIIRH

Menilik II Referral Hospital

PROM

Premature rupture of membrane

RDDMH

Ras Desta Damtew Memorial Hospital

SPHMMC

Saint Paul Hospital Millennium Medical College

SPSS

Statistical package for social science

SRS

simple random sampling

WHO

World health organization

Declarations

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Authors' contributions

IM was involved in conception and design of the study, acquisition of data, analysis of data, interpretation of data, revising the paper, and writing of the manuscript. KH and HH were involved in advising during proposal development, data analysis, and revising the paper. All authors read and approved the final manuscript.

Ethics declaration

Ethical clearance obtained from St. Paul Millennium medical college Institutional Health Research Ethics Review Committee (IHRERC). Written informed consent obtained from all participants and/or their guardians for study participation. All methods were performed in accordance with the relevant guideline and regulations.

Consent for publication

Not applicable

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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