

Original Research

The Prevalence and Determinants of Emotional Violence and Controlling Behaviours in Intimate Relationships During Pregnancy: Insights from an Analytical Cross-Sectional Study in Central Tanzania

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Abstract

Introduction: Pregnancy is a period of increased vulnerability to intimate partner violence (IPV), as women undergo significant physical and emotional changes requiring support from their male partners. However, limited evidence exists on the determinants of emotional and controlling abuse during pregnancy, particularly in central Tanzania. This study aimed to determine the prevalence of emotional violence and controlling behavior and determinants influencing the occurrence of the forms of IPV in the region.

Methods: An analytical cross-sectional study was conducted in the Central Zone of Tanzania, involving 360 postnatal women. A four-stage sampling technique was used to select participants,

who were interviewed using a semi-structured questionnaire. Bivariate and multivariate logistic regression analyses were performed using SPSS version 25 to assess determinants of IPV during pregnancy.

Results: Emotional violence during pregnancy affected 42.8% of women, while 58.3% experienced male partner controlling behaviour. Civil marriage reduced the likelihood of emotional violence (aOR=0.16; 95%CI:0.03-0.76), whereas not cohabiting with a partner (aOR=3.23; 95%CI:1.43-7.29) and partner alcohol use (aOR = 3.94; 95%CI:1.97-7.88) increased the risk of emotional violence. Controlling behaviour was more likely when women independently chose their partners (aOR=3.20; 95%CI:1.39-7.68) and among partners employed in the private (aOR=2.14; 95%CI:1.03-4.48) and government sectors (aOR=3.43; 95%CI:1.21-9.70) compared to farmers.

Conclusion: The findings indicate that emotional violence and controlling behaviour during pregnancy are widespread and influenced by relationship dynamics, partner behaviours, and gender norms. The results highlight the need for integrated antenatal and community interventions focusing on early identification of IPV, male involvement, and addressing harmful social and behavioural norms to reduce violence during pregnancy.

Keywords: *Emotional Violence; Controlling Behaviour; Pregnant Women*

Introduction

Intimate partner violence (IPV) during pregnancy is a critical global public health concern with serious consequences for the health and well-being of women and their unborn children (1). Pregnancy represents a period of increased vulnerability, marked by profound physical, emotional, and social transitions that require increased care, emotional security, and partner support (2). When such support is absent or replaced by coercive and abusive behaviours, intimate relationships may become a source of stress, fear, and harm, increasing women's susceptibility to IPV during this critical life stage.

Emotional violence and male controlling behaviours are common forms of IPV during pregnancy that are often normalized and underreported. These behaviours frequently coexist, with controlling practices reinforcing emotional abuse within intimate relationships (3,4). Through this dynamic, women's autonomy is progressively eroded, creating dependency and reinforcing power imbalances that shape daily interactions during pregnancy (5).

Emotional violence is a form of IPV involving verbal and nonverbal acts that cause psychological harm, undermine self-worth, and threaten emotional security (6). During pregnancy, such abuse can intensify emotional distress, anxiety, and fear, with documented associations to adverse outcomes such as miscarriage, stillbirth, preterm birth, and low birth weight (7). Emotional violence is often sustained and legitimized through controlling behaviours that isolate women from social support and suppress their ability to seek help or negotiate safer relationship dynamics (8).

Financial abuse is a major form of controlling behaviour in which women's access to money and economic decision-making is restricted, reinforcing dependency and compliance within intimate relationships (9). During pregnancy, such practices directly compromise women's ability to access antenatal care, adequate nutrition, and safe living conditions, hence amplifying both emotional distress and health risks (10). Financial deprivation reinforces controlling behaviour by increasing women's emotional vulnerability and limiting their autonomy within intimate relationships (11). In many low and middle-income settings, including Tanzania, entrenched gender norms further legitimize male dominance in household decision-making, particularly health-seeking behaviors (12). Pregnant women may remain passive participants in maternal health decisions, despite being primary recipients of care, due to limited autonomy imposed by controlling partners (13). This reduced agency limits women's engagement with maternal health services and increases the risk of adverse maternal and neonatal outcomes (14).

Evidence indicates that factors such as low partner education and alcohol use increase the risk of IPV during pregnancy (15). However, much of the existing literature treats IPV as a homogeneous construct (16,17), offering limited insight into the specific determinants of emotional violence and controlling behaviours that dominate women's lived experiences during pregnancy.

This study is informed by Feminist Theory and Social Cognitive Theory, which explain how gender power inequalities and learned behaviours contribute to emotional violence and controlling behaviours during pregnancy (18). From this perspective, emotional violence and controlling behaviours reflect gendered power inequalities that may intensify during pregnancy due to increased dependence and expectations of women's compliance.

Social Cognitive Theory complements this structural lens by explaining how abusive behaviours are learned, reinforced, and maintained through social interactions and normative expectations (19). Male controlling behaviours are often reinforced by cultural norms and perceived authority, while women's responses may be influenced by fear, low self-efficacy, and limited alternatives, contributing to the

persistence of emotional violence during pregnancy (20). Feminist Theory explains how gender inequality and power imbalances contribute to emotional violence and controlling behaviours during pregnancy.

Despite evidence that IPV during pregnancy is common and linked to poor maternal and neonatal outcomes (21), limited studies have explored emotional violence, male controlling behaviours, and their determinants (22), particularly in low resource settings such as Tanzania. Therefore, this study assessed the prevalence and determinants of emotional violence and male partner controlling behaviours during pregnancy.

Methods

Study design and setting

This study employed an analytical cross-sectional design to simultaneously estimate the prevalence of emotional violence and controlling behaviours during pregnancy and examine their determinants. Central Tanzania is geographically situated in the heart of Tanzania, encompassing several key regions such as Dodoma, Singida, and Manyara regions. Central Tanzania is characterized by relatively high fertility rates of 6.2, 6.6, and 6.7, respectively (23), in line with many other regions in the country. Fertility rates in these areas are often above the national average of 5.9 (23). According to the Tanzania Ministry of Health Annual Health Statistics, Dodoma, Singida, and Manyara regions collectively have approximately 962 health facilities, comprising 39 hospitals, 121 health centres, and 802 dispensaries, reflecting a predominantly primary healthcare-oriented system (24). Dodoma and Singida were purposively selected from the Central Zone due to their rapidly growing populations and socio-cultural characteristics that closely reflect those of the remaining region (25).

Study population

Postnatal women within 42 days to six months who were attending clinics in central Tanzania were included in the study. The inclusion criteria were all postnatal mothers who had recently given birth within 42 days to six months, who were living with male partners during pregnancy, and who consented to participate in the study. The 42-day to six-month postpartum period was selected to capture experiences during pregnancy while minimizing recall bias. This timeframe also enhances the feasibility of recruitment while ensuring that reported exposures remain recent and relevant to the pregnancy period. The exclusion criteria were all postnatal mothers who were sick or had infants who were sick during the time of data collection.

Sample size estimation and sampling technique

Cochrane's (26) formula was used to determine the minimum sample size required for this study.

$$n = \frac{Z^2 P(1-P)}{e^2}$$

Where:

n=desired sample size.

Z= critical value at 95% confidence level corresponds to 1.96.

e =marginal error (desired level of precision, which is 5%).

P= prevalence of IPV during pregnancy in a study conducted in Moshi Municipal was 30.3% (27).

$$n = \frac{1.96^2 \times 0.303 (1-0.303)}{0.05^2}$$
$$n = 324$$

A 10% non-response rate (n=32) was added to the initially calculated sample size to account for non-participation and incomplete responses. Consequently, the final required sample size was 356 postnatal mothers.

A multistage sampling design was employed. In stage one, Dodoma and Singida regions were purposively selected. Stage two involved purposive selection of three districts per region, one urban and two rural, to ensure contextual representation. Stage three included all district-level facilities within the selected districts: Makole Health Centre (urban reproductive health centre), Kondoa District Hospital, and Mpwapwa District Hospital in Dodoma; while from Singida, Sokoine Health Centre (urban reproductive health centre), Ikungi District Hospital, and Manyoni District Hospital were selected. In stage four, all eligible postnatal mothers attending the selected health facilities were consecutively recruited upon arrival during the two-month data collection period.

Data collection tool and procedure

Data were collected using a structured interviewer-administered questionnaire adapted from the literature to capture information on IPV during pregnancy. The questionnaire consisted of sections on emotional violence and partners' controlling behaviours. Data collection was conducted through face-to-face interviews in a private setting to ensure confidentiality and minimize social desirability bias. Respondents answered in a dichotomous format (Yes/No). Completed

questionnaires were reviewed daily for completeness and consistency. Respondents were approached and invited to provide informed consent before enrolment. Data collection was conducted within seven days at each facility. This structured multistage approach enhanced coverage and ensured a representative sample of postnatal mothers in Central Tanzania.

Variable measurement

Prevalence was derived from respondents' responses to structured items assessing emotional violence and controlling behaviours. Each domain comprised a set of standardized questions capturing specific acts, with binary response options (yes/no). A respondent was classified as having experienced emotional violence or controlling behaviour if she reported at least one act within the respective domain during the reference period (28). Prevalence was then calculated as the proportion of women meeting this criterion out of the total number of respondents.

Data analysis

Data were cleaned and analyzed using the SPSS version 25.0 software package (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarize the data into frequencies, percentages, mean age and standard deviation. Binary logistic regression was then conducted at a 95% confidence interval to examine associations between the determinants and outcomes. Variables with p-values less than or equal to 0.2 in the univariate analysis were selected for further analysis (29). The results were presented as crude odds ratios (cOR) and Adjusted Odds Ratios (AOR) with their p-values. Odds ratios were used to estimate the strength of association between independent variables and the outcome, while adjusted odds ratios controlled for potential confounding factors.

Ethical considerations

The study received ethical approval from the Institutional Research Review Committee of the University of Dodoma (Ref. No. MA.84/261/02), along with administrative permission from the Regional Administrative Authorities of Dodoma and Singida Regions. Respondents were informed about the study's objectives, procedures, risks, and benefits before giving both verbal and written consent. To ensure confidentiality, respondents were assigned identification numbers, and they had the right to voluntary participate and withdraw without any adverse consequences. All data were securely stored under the principal investigator's custody.

Results

Socio-demographic characteristics

The study included 360 postnatal mothers, achieving a 100% response rate. Most women were aged 20-34 years, had primary education, lived in monogamous unions, and were mainly housewives. The mean maternal age was 27.34 ± 6.34 years, the mean age at marriage was 21.78 ± 4.16 years, and the mean parity was 2.47 ± 1.55 children. Most respondents initiated antenatal care after the first trimester and reported no history of abortion or preterm birth (Table 1).

Table 1: Socio-demographic characteristics of post-delivery mothers in central Tanzania (N=360)

Variable	Frequency (n)	Percent (%)
Age (years)		
17-19	28	7.8
20-34	276	76.7
35-45	56	15.5
Education level of a woman		
No formal education	15	4.2
Primary education	174	48.3
Secondary education	129	35.8
College or university education	42	11.7
Education level of a partner		
No formal education	11	3.1
Primary education	153	42.5
Secondary education	113	31.4
College or university education	83	23
Religion		
Christian	200	55.6
Muslim	160	44.4
Residence		
Rural	163	45.3
Urban	197	54.7
Age at marriage (years)		
12-19	116	32.2
20-40	244	67.8
Type of marriage		
Monogamous	325	90.3
Polygamous	35	9.7

Type of marriage ceremony

No marriage ceremony	127	35.3
Civil marriage	13	3.6
Religious marriage	172	47.8
Customary marriage	48	13.3

Average daily income

<2500 Tshs per day	168	46.7
2500 or more per day	192	53.3

Now living with a partner

Yes	320	88.9
No	40	11.1

Distribution of items of emotional violence, financial abuse and controlling behaviour in intimate relationships during pregnancy

Regarding emotional violence, a substantial proportion of women reported experiencing insults from their intimate partners (41.1%). This was often accompanied by instances of being belittled or humiliated in front of others (14.2%). Additionally, controlling behaviour by intimate partners was prevalent, with many women being constantly monitored and required to disclose their whereabouts at all times during pregnancy (35.8%). Moreover, they often had to seek permission from their partners to access healthcare services (32.2%), Table 2.

Table 2: Distribution of items of emotional violence, financial abuse and controlling behaviour in intimate relationships during pregnancy (N=360)

Variables	Yes n (%)	No n (%)
Emotional Violence		
Ever been insulted/made feel bad about yourself during pregnancy?	149 (41.4)	211 (58.6)
Ever belittled or humiliated in front of other people during pregnancy?	51 (14.2)	309 (85.8)
Ever scared or intimidated on purpose during pregnancy?	40 (11.1)	320 (88.9)
Ever threatened you when visiting friends/family during pregnancy?	22 (6.1)	338 (93.9)
Control Behavior		
Ever tried to keep you from seeing friends during pregnancy?	34 (9.4)	326 (90.6)
Ever tried to restrict contacts with your family members during pregnancy?	14 (3.9)	346 (96.1)

Ever insisted on knowing where you are all the time during pregnancy?	129 (35.8)	231 (64.2)
Ever ignored you and treated you indifferently during pregnancy?	49 (13.6)	311 (86.4)
Ever got angry if you speak with another man during pregnancy?	90 (25)	270 (75)
Ever become suspicious that you were unfaithful during pregnancy?	62 (17.2)	298 (82.8)
Ever expect you to ask permission when you wanted to seek health care during pregnancy?	116 (32.2)	244 (67.8)

Distribution of emotional violence by women's characteristics

For emotional violence, significant associations were observed with religion ($p=0.008$), dowry/bride price payment ($p=0.033$), type of marriage ceremony ($p=0.013$), current cohabitation with a male partner ($p=0.003$), occupation of male partners ($p=0.012$), alcohol intake during pregnancy ($p=0.018$) and male partners' alcohol intake ($p<0.001$) Table 3.

Table 3: Distribution of emotional violence by women's characteristics (N=360)

Variables	Emotional violence		χ^2	p-value
	No n (%)	Yes n (%)		
Religion			7.117	0.008
Christian	102 (51)	98 (49)		
Muslim	104 (65)	56 (35)		
Residence			0.836	0.361
Rural	89 (54.6)	74 (45.4)		
Urban	117 (59.4)	80 (40.6)		
Dowry/bride price payment			4.537	0.033
Yes	168 (60.2)	111 (39.8)		
No	38 (46.9)	43 (53.1)		
Type of marriage ceremony			10.698	0.013
No ceremony	65 (51.2)	62 (48.8)		
Civil marriage	10 (76.9)	3 (23.1)		
Religious marriage	110 (64)	62 (36)		
Customary marriage	21 (43.8)	27 (56.2)		
Now living with partner			9.078	0.003
Yes	192 (60)	128 (40)		
No	14 (35)	26 (65)		
Occupation of partners			12.786	0.012
Farmer	47 (60.3)	31 (39.7)		
Student	4 (50)	4 (50)		
Private employee	48 (46.2)	56 (53.8)		
Government employee	25 (50)	25 (50)		
Others	82 (68.3)	38 (31.7)		
Alcohol intake in pregnancy			5.581	0.018
Yes	12 (37.5)	20 (62.5)		

No	194 (59.1)	134 (40.9)		
Husband alcohol habit			22.005	<0.001
Yes	17(29.3)	41 (70.7)		
No	189 (62.6)	113 (37.4)		
History of abortion			1.902	0.168
Yes	22 (47.8)	24 (52.2)		
No	184 (58.6)	130 (41.4)		
Parity categorized			3.246	0.197
Para one	74 (61.2)	47 (38.8)		
Para 2-4	104 (53.1)	92 (46.9)		
More than 4	28 (65.1)	15 (34.9)		
Decision maker			3.104	0.376
Equally	131 (58)	95 (42)		
Husband	70 (56.9)	53 (43.1)		
Wife	1 (20)	4 (80)		
Others	4 (66.7)	2 (33.3)		

Distribution of controlling behaviour during pregnancy across women's characteristics

Variables that demonstrated a significant association with controlling behaviour, significant relationships were observed with education level of the respondent ($p=0.049$), education level of male partners ($p=0.05$), religion of the respondent ($p=0.005$), choice of a partner ($p=0.001$), average monthly income ($p=0.01$), occupation of a male partner ($p=0.01$), and history of abortion ($p=0.048$) Table 4.

Table 4: Distribution of controlling behaviour during pregnancy across women's characteristics (N=360)

Variables	Controlling Behavior		χ^2	p-value
	No n (%)	Yes n (%)		
Age of the woman (years)			1.823	0.402
17-19	15 (53.6)	13 (46.4)		
20-34	113 (40.9)	163 (59.1)		
35-45	22 (39.3)	34 (60.7)		
Age of the male partner (years)			1.879	0.17
20-34	93 (44.7)	115 (55.3)		
35-66	57 (37.5)	95 (62.5)		
Education level of a woman			7.850	0.049
No formal	9 (60)	6 (40)		
Primary	82 (47.1)	92 (52.9)		
Secondary	45 (34.9)	84 (65.1)		
College or University	14 (33.3)	28 (66.7)		
Education level of a partner			7.819	0.05

No formal	4 (36.4)	7 (63.6)		
Primary	72 (47.1)	81 (52.9)		
Secondary	50 (44.2)	63 (55.8)		
College or University	24 (28.9)	59 (71.1)		
Religion			0.514	0.473
Christian	80 (40)	120 (60)		
Muslim	70 (43.8)	90 (56.2)		
Ethnicity			14.765	0.005
Gogo	24 (45.3)	29 (54.7)		
Rangi	26 (36.1)	46 (63.9)		
Sandawe	0 (0.0)	4 (100)		
Nyaturu	40 (59.7)	27 (40.3)		
Others	60 (36.6)	104 (63.4)		
Residence			0.439	0.508
Rural	71 (43.6)	92 (56.4)		
Urban	79 (40.1)	118 (59.9)		
Who chose your partner?			18.430	0.001
Both	57 (53.8)	49 (46.2)		
Myself	46 (29.5)	110 (70.5)		
My family	2 (66.7)	1 (33.3)		
My partner	43 (46.7)	49 (53.3)		
Partner's family	2 (66.7)	1 (33.3)		
Dowry/bride price payment			2.167	0.141
Yes	122 (43.7)	157 (56.3)		
No	28 (34.6)	53 (65.4)		
Average daily income			6.612	0.01
<2500 Tshs per day	82 (48.8)	86 (51.2)		
2500 or more per day	68 (35.4)	124 (64.6)		
Occupation of women			9.679	0.085
House wife	64 (45.7)	76 (54)		
Farmer	31 (53.4)	27 (46.6)		
Student	2 (33.3)	4 (66.7)		
Private employee	22 (40)	33 (60)		
Government employee	5 (26.3)	14 (73.7)		
Others	26 (31.7)	56 (68.3)		
Occupation of partners			17.261	0.002
Farmer	46 (59)	32 (41)		
Student	2 (25)	6 (75)		
Private employee	43 (41.3)	61 (58.7)		
Government employee	12 (24)	38 (76)		
Others	47 (39.2)	73 (60.8)		
Alcohol intake in pregnancy			1.568	0.211
Yes	10 (31.3)	22 (68.7)		
No	140 (42.7)	188 (57.3)		

History of abortion			3.900	0.048
Yes	13 (28.3)	33 (71.7)		
No	137 (43.6)	177 (56.4)		
Now living with a partner			0.099	0.753
Yes	131 (42)	181 (58)		
No	19 (39.6)	29 (60.4)		
Parity			4.221	0.121
Para one	50 (41.3)	71 (58.7)		
Para 2-4	76 (38.8)	120 (61.2)		
More than 4	24 (55.8)	19 (44.2)		
Decision maker			2.208	0.53
Equally	90 (39.8)	136 (60.2)		
Husband	56 (45.5)	67 (54.5)		
Wife	1 (20)	4 (80)		
Others	3 (50)	3 (50)		

Determinants of emotional violence

The determinants of emotional violence were the type of marriage ceremony, with women in civil marriages having lower odds of experiencing emotional violence than those in customary marriages (aOR = 0.16; 95% CI: 0.03-0.76), not living with a male partner at the time of the interview (aOR = 3.23; 95% CI: 1.43-7.29), and having a husband who used alcohol (aOR = 3.94; 95% CI: 1.97-7.88), Table 5.

Table 5: Determinants of emotional violence

Variables	OR (95%CI)	p-value	aOR (95%CI)	p-value
Religion				
Christian	Ref.		Ref.	
Muslim	0.56 (0.37-0.86)	0.008	1.40 (0.75-2.62)	0.290
Dowry/bride price payment				
Yes	0.58 (0.36-0.96)	0.034	0.83 (0.39-1.79)	0.640
No	Ref.		Ref.	
Type of marriage ceremony				
No ceremony	0.74 (0.38-1.45)	0.381	0.55 (0.23-1.31)	0.176
Civil marriage	0.23 (0.06-0.97)	0.043	0.16 (0.03-0.76)	0.021
Religious marriage	0.44 (0.23-0.84)	0.013	0.49 (0.21-1.11)	0.087
Customary marriage	Ref.		Ref.	
Now living with a partner				
Yes	Ref.		Ref.	
No	2.79 (1.40-5.54)	0.003	3.23 (1.43-7.29)	0.005
Occupation of partners				
Farmer	Ref.		Ref.	
Student	1.52 (0.35-6.52)	0.576	1.09 (0.20-5.92)	0.917

Private employee	1.77 (0.98-3.21)	0.060	1.98 (0.95-4.13)	0.070
Government employee	1.52 (0.74-3.10)	0.255	1.46 (0.62-3.44)	0.387
Others	0.70 (0.39-1.27)	0.245	0.82 (0.41-1.64)	0.569
Alcohol intake in pregnancy				
No	Ref.		Ref.	
Yes	2.41(1.14-5.10)	0.021	1.43 (0.59-3.48)	0.433
Husband's alcohol habit				
No	Ref.		Ref.	
Yes	4.03 (2.19-7.44)	<0.001	3.94 (1.97-7.88)	<0.001

Determinants of Controlling Behaviour

The key determinants of controlling behaviour among intimate partners were influenced by women who selected their partners (aOR=3.27; 95%CI:1.39-7.68), who faced a higher likelihood of controlling behaviour compared to the reference category of couples, where both partners participated in choosing each other. Partner occupation also played a crucial role, with private employees (aOR=2.15; 95% CI:1.03-4.48) and government employees (aOR=3.43; 95%CI:1.21-9.70) at higher risk compared to farmers, the reference category Table 6

Table 6: Determinants of Controlling Behaviour

Variables	OR (95%CI)	p-value	AOR (95%CI)	p-value
Education level of a woman				
No formal	0.33 (0.10-1.13)	0.077	0.66 (0.14-3.11)	0.597
Primary	0.56 (0.28-1.14)	0.109	1.05 (0.05-2.59)	0.918
Secondary	0.93 (0.93-0.45)	0.854	1.38 (0.58-3.31)	0.466
College or University	Ref.		Ref.	
Education level of a partner				
No formal	0.71 (0.19-2.66)	0.613	1.55 (0.31-7.85)	0.594
Primary	0.46 (0.26-0.81)	0.007	0.91 (0.41-2.04)	0.819
Secondary	0.51 (0.28-0.94)	0.030	0.89 (0.41-1.91)	0.755
College or University	Ref.		Ref.	
Who chose your partner?				
Both	Ref.		Ref.	
Myself	2.78 (1.66-4.65)	0	3.27 (1.39-7.68)	0.007
My family	0.58 (0.05-6.61)	0.662	0.43 (0.034-5.444)	0.517
My partner	1.33 (0.76-2.32)	0.324	1.74 (0.90-3.34)	0.100
Partner's family	0.58 (0.05-6.61)	0.662	1.65 (0.13-20.24)	0.696
Occupation of partners				
Farmer	Ref.		Ref.	
Student	4.31 (0.82-22.74)	0.085	4.71 (0.73-30.29)	0.103
Private employee	2.04 (1.12-3.70)	0.019	2.15 (1.03-4.48)	0.042

Government employee	4.55 (2.07-10.03)	0.000	3.43 (1.21-9.70)	0.020
Others	2.23 (1.25-3.99)	0.007	1.99 (0.10-4.31)	0.051
History of abortion				
No	Ref.		Ref.	
Yes	1.97 (0.10-3.88)	0.051	2.03 (0.96-4.31)	0.066

Discussion

In contrast, the present study focused on abuse from male partners during the most recent pregnancy. Conversely, a study conducted in South Africa reported a lower prevalence of approximately 13.1% among adolescent girls and young women (32), which may be attributed to socio-demographic and socio-economic differences, including gender norms, legal protections and access to support systems. These variations emphasize the need for context-specific approaches to address IPV.

The current study revealed a high prevalence of controlling behaviours by intimate partners, with many women subjected to constant surveillance and required to disclose their whereabouts throughout pregnancy. The necessity of seeking permission to access healthcare services further undermines their autonomy, leading to delayed or inadequate prenatal care and increasing the risk of pregnancy complications and poor maternal and neonatal health outcomes. These findings emphasize the need for legal protections, community awareness, and gender-sensitive healthcare policies to address psychological abuse and its far-reaching consequences (33).

The study identified several determinants of emotional abuse during pregnancy, including the type of marriage ceremony, cohabitation status with a male partner at the time of the interview, and the male partner's alcohol use. Women in civil marriages were significantly less likely to experience emotional abuse than those in customary marriages. This finding may reflect stronger legal protections, greater relationship stability, and more equitable gender norms within formally recognized unions. However, evidence from a Nigerian study reported contrasting findings, where women in civil marriages were more likely to experience violence than those in religious marriages (34). The observed variation may be attributed to differences in socio-cultural contexts, study populations and the categories used for marital comparison, as the Nigerian study compared civil and religious marriages rather than civil and customary unions.

The study found that women who were not cohabiting with their male partners during the postpartum period were more likely to experience emotional violence during pregnancy. This

finding may suggest that emotional abuse contributed to relationship instability and eventual separation. Emotional violence may disrupt partner relationships and reduce emotional, social, and financial support after childbirth, increasing women's psychological distress and vulnerability. These findings emphasize the broader social and emotional consequences of IPV during pregnancy, extending beyond the pregnancy period into the postpartum phase (30).

Additionally, male partners' alcohol use was a significant driver of emotional violence during pregnancy, consistent with studies linking substance use to IPV. Alcohol consumption can impair judgment, lower inhibitions, and increase aggression, making abusive behaviour more likely. It can also contribute to financial instability, neglect, and relationship conflicts, further increasing the risk of emotional abuse. Similar studies conducted elsewhere have also linked alcohol misuse and IPV during pregnancy (35-37).

Furthermore, the study identified women's autonomy in choosing their lifetime intimate partners and their employment status as the primary determinants of male partners' controlling behaviour. Women who independently selected their male partners were three times more likely to experience controlling behaviours compared to those who shared the decision-making process. This may reflect patriarchal social norms where men are traditionally expected to exercise authority within relationships. In such contexts, women's independent decision-making may be perceived as challenging established gender roles, leading some men to adopt controlling behaviours to maintain dominance. Similar findings have been reported by Başkan and Alkan (38) in Turkey, who linked controlling behaviour to patriarchal ideologies and male dominance, while Andualem et al. (39), who conducted a study in sub-Saharan Africa, highlighted the role of persistent gender power imbalances and socio-cultural norms in sustaining controlling behaviours within intimate relationships.

While this study provides comprehensive insights, its cross-sectional design limits the ability to establish causal inferences between the determinants of emotional violence and male partners' controlling behaviours during pregnancy among postnatal mothers in the central zone. This limitation was partially addressed through the use of regression analyses that controlled for potential confounders, thereby strengthening the internal validity and reliability of the findings. Future studies employing longitudinal designs are recommended to further clarify causal pathways and enhance the evidence.

Conclusions

The study shows that emotional violence and controlling behaviours during pregnancy are common and influenced by relationship dynamics, gender norms, autonomy, and partner alcohol use. The findings emphasize the need for routine IPV screening, strengthened social support and protection systems, promotion of gender-equitable norms, and targeted interventions to improve women's autonomy and maternal well-being.

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Authors' contributions

FM led the conceptualization process, authored the method section, conducted data collection, and initiated manuscript drafting. KN supervised the conceptualization, method drafting, data collection and provided thorough critical feedback on the manuscript. YT, AM, RK, HS, and MO contributed significantly by offering comprehensive critiques of the manuscript. All authors were actively engaged in reviewing and ultimately approving the final manuscript.

Availability of data and materials

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

Consent for publication

Not applicable

Competing interests

The authors declare that they have no competing interests

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