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Original Research

A community-based intervention to challenge attitudes towards intimate partner violence: results from a randomised community trial in rural South-West Nigeria

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Abstract

Introduction: Intimate partner violence (IPV) is a major public health concern worldwide, with significant repercussions for women's health. In some parts of the world, IPV is considered an acceptable practice, especially in rural areas. Attitudes supportive of IPV have been reported as one of the foremost predictors of IPV, and a shift in the attitudes that permit, promote, and perpetuate IPV is required to substantially reduce its occurrence. Community-based interventions are a feasible strategy to engage community members in efforts to prevent IPV. This study tested a community mobilisation intervention to challenge attitudes towards IPV and prevent violence within intimate relationships.
Methods: This randomised community trial was conducted in selected rural communities in Oyo State, Nigeria, between January 2019 and April 2021. The study employed a convergent parallel mixed-methods design and a three-stage sampling technique in selecting two local government areas, eight communities and the study participants. The 6-month community mobilisation intervention, focused on creating awareness and challenging attitudes supportive of IPV, was evaluated using two cross-sectional surveys (pre-and post-intervention), 12 in-depth interviews, and nine focus group discussions. The outcomes for this study, assessed using the WHO Women's Health Questionnaire, included attitudes supportive of IPV, women's experiences of IPV and men's perpetration of IPV. Difference-in-differences (DID) regression models were estimated to compare changes in IPV levels in the intervention and control arms, while qualitative data were analysed using a thematic approach.
Results: At baseline, 628 men and 667 women responded to the survey, and 640 men and 658 women responded to the survey at endline. The median age of the respondents was 35 years at baseline and 40 years at endline. In the intervention group, the proportion of women with attitudes supportive of IPV reduced between baseline and endline from 65.2% to 35.1% versus 45.2% to 32.7% in the control group (DID= –0.116, p=0.039). Women's

past year experience of IPV also reduced from 30.3% to 1.2% versus 48.4% to 33.2% in the control group (DID= –0.131, p=0.006). Changes in the proportion of men who had attitudes supportive of IPV or perpetrated IPV did not follow this trend. In the intervention group, the proportion of men with attitudes supportive of IPV increased between baseline and endline from 40.1% to 44.6%, as they did in the control group – from 43.7% to 45.8% (DID=0.015, p=0.805). Men's past-year perpetration of IPV reduced from 29.9% to 19.9% versus 43.2% to 10.2% in the control group (DID= –0.050, p=0.155). Respondents to the qualitative interviews in both the intervention and control groups at baseline were aware of the various forms of IPV in their communities, and had attitudes supportive of physical violence; however, those in the intervention group alluded to a reduction in IPV at endline. **Conclusion**: This trial demonstrates the potential of community mobilisation as an intervention that can reduce the proportion of women who have attitudes supportive of IPV and had experienced IPV in the previous year.

Keywords

attitudes towards intimate partner violence, intimate partner violence, Nigeria, perpetration.

Introduction

Intimate partner violence (IPV) is arguably the most prevalent, persistent and pernicious type of violence against a person, a travesty of the rights of those who experience it and a significant public health problem[1-3]. IPV is defined as any behaviour within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours[4]. In many instances both women and men can experience IPV, although women are more likely to do so, bearing the consequences of emotional, sexual and severe physical violence[5].

The socio-ecological framework helps to conceptualise the factors influencing IPV behaviour at four levels[6,7]. The framework shows that, at the individual level, younger age, lower educational status, lower economic status, substance misuse and childhood exposure to abuse are risk factors of IPV for those who experience it[8,9]. At the relationship level, factors such as age difference between partners, educational disparity, more children, marital dissatisfaction or discord, family structure, and male control of wealth and decision-making have been documented to be risk factors associated with IPV[10-12]. The community-level factors within the socio-ecological model suggest that certain factors within the physical or social environment, such as living in rural areas, acceptance of traditional gender roles, acceptance of violence, few women with high levels of autonomy, few women with higher education, and feeble community deterrents to violence increase the risk of women experiencing IPV[13]. Finally, societal level factors suggest that prevailing inequitable social norms and inadequate mechanisms to penalise perpetrators of violence all contribute to fuelling women's experience of IPV[14,15].

Globally, an estimated 13% of ever married/partnered women within the reproductive age have been a victim of at least one of physical and sexual violence from an intimate partner in the preceding 12 months[16]. In Nigeria, past-year prevalence of physical, sexual, and emotional IPV among women aged 15–49 years is 36% nationally and 20% for the South-West region[17]. The IPV prevalence in the South West is the lowest of the six geopolitical zones of Nigeria, and the reason for this could be because women in this zone, compared to their counterparts in other geopolitical zones of the country, are more empowered (in terms of being more educated, exposed to mass media, and likely to own a mobile phone or bank account), and are likely to be protected from being abused[17,18]. Yet South-West Nigeria, like other parts of Sub-Saharan Africa, is patriarchal and has been seen to endorse IPV. Here, IPV is considered by some as an acceptable practice within intimate partner relationships, making women very susceptible to IPV and sometimes conditioned to accept it as the norm[19,20]. These beliefs are particularly more engrained in rural areas, where studies have shown that prevalence of physical and emotional IPV is higher than in urban areas[21,22]. Women in rural areas are less educated and less exposed to media compared to their counterparts in the cities, making them more vulnerable to IPV[21,23]. Women in rural South West Nigeria experience IPV even though Nigeria passed the comprehensive *Violence Against Persons Prohibition Act 2015*, which aims to eliminate all forms of violence in both the private and public spheres and includes the right to assistance for victims of violence. Hence, there is a need to shift the attitudes that permit, promote, and perpetuate IPV, as this is a critical requirement for the research community to respond effectively to partner violence[24-26].

While the violence prevention research landscape is still evolving, only in the past two decades has it started to become a high priority for practitioners and researchers to devote resources into conducting more primary prevention research[27-29]. Some studies suggest that interventions tailored towards challenging social norms can effectively sway individual attitudes and behaviours from supporting IPV[10,30,31]. To this end, community-based interventions have been recommended as promising strategies to prevent IPV, involving working in cooperation with community members to raise awareness and challenge existing norms. Interventions such as Safe Homes and Respect for Everyone (SHARE), a cluster randomised controlled trial in rural Uganda; the Start, Action, Support and Action (SASA!) project, a cluster randomised controlled trial conducted in Uganda; Rural Response System Community-Based Action Teams (RSS-COMBAT), a community-randomised controlled trial in rural Ghana; and Together to End Violence Against Women (TEVAW) program, a cluster randomised controlled trial in rural Tanzania have shown good evidence that community-based interventions, particularly community mobilisation interventions, can transform attitudes towards social norms and reduce IPV behaviours when rigorously planned, have a robust theory of change and are rooted in knowledge of local context[32-35]. There is currently a paucity of such interventions in Nigeria[36-38].

Community mobilisation interventions are an assortment of approaches and strategies to convincingly inform leaders in the community, religious groups, and the general public in favour of or against a targeted behaviour[39]. They involve promoting awareness and combatting health challenges in conjunction with the community. Community mobilisation is one of many related efforts that promote participation in health-related interventions and,

when deployed in violence prevention, aims to create an atmosphere that will generate support for the equality of both sexes and non-use of violence among community members, leaders, and institutions[31]. Community mobilisation interventions can be delivered as social marketing and edutainment campaigns, community activism and digital technology programs to address IPV[40,41]. This study tested a community mobilisation intervention to challenge attitudes towards IPV and prevent violence within intimate relationships.

Methods

Study design, setting and participants

This study, conducted between January 2019 and April 2021, employed a randomised community trial design to evaluate the effect of a community mobilisation intervention on attitudes towards and prevalence of IPV in selected rural communities in South West Nigeria. The study included a cross-sectional survey conducted between July and August 2019 at baseline, a community mobilisation intervention conducted between January and August 2020 and a post-intervention cross-sectional survey conducted between February and March 2021. The intervention was evaluated using a mixed-methods approach, in which quantitative and qualitative data were collected at baseline and endline to estimate changes in outcome measures.

The study was conducted in Oyo State, South West Nigeria, where two of the twelve rural local government areas (LGAs) in Oyo State were purposively selected for this study. The LGAs were selected because they were judged to be comparable in population size and distribution, ethnic constituency, and because the two LGAs were more than an hour's drive from each other, a distance considered sufficient to minimise the risk of contamination of the sample. The LGAs were randomised such that one received the intervention and the other was the control. In the intervention LGA, the community serving as the LGA headquarters, and adjoining communities, making a total of six communities, were purposively selected to increase the sample size, while the community serving as the LGA headquarters and an adjoining community were purposively selected as the control communities.

Recruitment of participants

In all selected communities a mapping and listing exercise was conducted, mainly because the sampling frame available (from the 2006 census) is outdated. The listing provided a complete list of men and women of reproductive age who were married or cohabiting as a household in the selected communities. A total of 2576 men and women of reproductive age were listed in the intervention communities, while a total of 2761 men and women of reproductive age were listed in the control communities. This information was necessary for an equal probability random selection of respondents. From the listing, eligible men or women were selected for interview from each household, using a random sampling method. Where a man or a woman was chosen in a household, no other person was selected for interview in that household, a measure taken to ensure women's safety and to maximise the disclosure of violence[17]. A fresh sample of respondents was drawn from the listing at baseline and another after the intervention, which meant the respondents at baseline were not necessarily the same as respondents for the post-intervention survey. More details about the recruitment process have been previously described[42].

Sample size calculation

Sample size estimation for this trial was determined based on guidance from Rutterford et al on sampling individuals[43]. It assumed a 10.7% prevalence of sexual violence to allow for maximum sample size, a 5% significance level, 80% power, a design effect of 2, a 6% effect size between study arms and significance level of 0.05[22,44]. Factoring 10% non-response, the estimated sample size was 680 individuals for baseline and 680 individuals post-intervention.

Study intervention

In the six intervention communities, a community mobilisation intervention was conducted in Yoruba, the predominant language spoken in these communities, from January to August 2020. The intervention included:

- introductory meetings with the LGA health teams and dialog with community leaders and other community stakeholders: As part of community entry, there were introductory meetings with the LGA health teams. There was also dialog with community leaders and stakeholders, where values were clarified, effects of IPV and possible actions against violence were discussed. The support of the community leaders was also enlisted given that the intervention was in rural communities, where community leaders have very prominent roles
- selection of model couples: One or two couples were nominated as 'model couples' by the leaders and the health workers in the community. The 'model couples' were trained and were part of the community mobilisation, facilitating small group meetings. The community mobilisation focused on creating awareness, challenging social norms, and promoting actions against violence by engaging men and women in small groups of 10–15 for a period of 6 months
- structured community workshops and small group meetings: The initial design of the intervention was for community members in the intervention arm of the study to be exposed to two sessions of community workshops. A total of four community workshops of not more than 30 people in each session were held in two of the intervention communities between February and March 2020. The workshops were facilitated by the research team, composed of one health promotion specialist, the model couple(s) for each community and one health worker in the community.

By March, due to the COVID-19 pandemic, the intervention was paused and redesigned to deliver weekly small group meetings of not more than eight people in open spaces. This was possible because, although many parts of Nigeria were in lockdown, this was not the case in Oyo State. However, there were measures to avoid large gatherings in order to reduce the transmission of infection. It was easier to conduct the small group meetings because of the rural setting of the intervention communities, where residents sit in open spaces outside their houses. To ensure that the intervention was delivered to all sections of each

intervention communities, the research team visited each community, holding small group meetings, from April to August 2020.

In both the community workshops and small group meetings, presentations addressing the study's objectives were made, and answers to questions from the community members were provided to clarify values regarding IPV.

Following evidence that community mobilisation interventions that are rigorously planned, with a robust theory of change and rooted in local knowledge, tend to be effective, this intervention offered participatory group sessions, promoted communication, engaged various stakeholders and challenged social norms[31]. The theory of change for this design was that through community mobilisation – including advocacy and community actions conducted by local stakeholders such as model couples within the community, health workers who were well known in the community, and local community leaders – attitudes supportive of IPV and unequal power distribution can be transformed by stimulating personal and collective reflection, thereby creating an environment that is known not to condone violence under any guise.

Study outcomes

The primary study outcome was the effect of the intervention on respondents' attitudes towards physical IPV. This was assessed by asking male and female respondents, at both baseline and endline, to respond 'yes' or 'no' to seven scenarios of physical IPV, as detailed in the WHO Multi-Country Study on Women's Health Questionnaire[45], with 'yes' indicating the opinion that physical violence was justified. Each response was coded 0 for 'no' or 1 for 'yes', and all responses to the seven scenarios were combined. A score of 1 or above indicated that a respondent's attitude was supportive of a man being physically violent towards his female partner in at least one of the seven scenarios and was therefore deemed to have attitudes supportive of physical IPV. Those who responded 'no' to all scenarios had a score of 0, meaning that they disagreed that husbands were justified to hit their wives and were hence not supportive of physical IPV.

The secondary outcomes were the effect of the intervention on past-year experience (for women only) and perpetration (for men only) of at least one type of IPV (physical, emotional and sexual), assessed at baseline and endline using an adaptation of the WHO Multi-Country Study on Women's Health Questionnaire[45]. For physical violence, respondents answered 'yes' or 'no' to six questions, scoring 1 or 0, respectively, for each question. A respondent had either experienced (for women) or perpetrated (for men) physical IPV if their combined score was 1 or above (the maximum score allowed was 6). For emotional abuse, respondents answered 'yes' (score of 1) or 'no' (score of 0) to four questions. A score of 1 or above indicated that the respondent had either experienced or perpetrated emotional abuse. This was also done for four questions about sexual violence, where respondents with a score of 1 or above had experienced or perpetrated sexual violence.

All scores where then aggregated such that respondents were judged to have experienced or perpetrated IPV if they had been victims (for women) or had perpetrated (for men) physical violence, emotional abuse or sexual violence against a spouse in the preceding year before the surveys.

Data collection tools and procedures

Quantitative data

Two cross-sectional surveys were held – one before the intervention and another post-intervention. For each survey, a fresh sample was drawn from the listing that was conducted before the baseline study. The questionnaires were translated into the local language (Yoruba) and back-translated into English before being scripted into the Open Data Kit Collect application. Baseline interviews took place between July and August 2019, prior to randomisation of LGAs. Respondents were gender-matched to field staff and interviewed in their homes, ensuring auditory and visual privacy. Endline interviews were conducted 6 months post-intervention (between February and March 2021), following the same protocol as at the baseline.

Qualitative data

In-depth interviews (IDIs) and focus group discussions were used to collect data at baseline in both the intervention and control communities, while focus group discussions were conducted at endline in just the intervention communities to explore respondents' perceptions of IPV and their perceptions of the intervention. A total of 12 in-depth interviews and nine focus group discussions were conducted in the local language (Yoruba) at baseline and post-intervention. A convenience sampling technique was used for selecting participants for the qualitative data collection. Men and women of reproductive age (women aged 15–49 years), living in the study communities, were recruited with the assistance of health workers and were invited to participate in the study after the purpose of the study had been explained to them. The participants were asked questions to explore their awareness of IPV, attitudes towards IPV, socio-cultural factors influencing IPV in their community and what preventive or support services were available in the community. The interviews were audio-recorded after receiving permission from the respondents, and lasted for 45–60 minutes. The in-depth interview / focus group discussion guide employed for this study was adapted from published literature to include open-ended interview questions, prepared to address the objectives of the study[46,47].

Quantitative analyses

Statistical analysis was done using Stata v15 (StataCorp; https://www.stata.com), on an intention-to-treat basis, as respondents were included in the analysis based on where they lived, whether they had contact with the intervention or not. Descriptive statistics of respondents were summarised in tables comparing the intervention arm with the control. Considering the differences in study outcomes at baseline between intervention and control arms, the difference-in-differences (DID) method was used to assess the changes in the study outcomes post-intervention. The parallel trend assumption was upheld by the authors, supposing that, without the intervention, the difference in outcome measures in the intervention and control group would remain constant over time, or the progression of change would be the same in the groups. A sensitivity analysis was also done, using inverse probability weighting analysis, to examine the extent to which the inference was sensitive to violation of the parallel trend assumption of the DID analysis. Similarly, covariates such as respondent's education, partner's use of alcohol, partners involved in fights and women's participation in decisions on household

purchases were adjusted for in the model, as they were consistent at pre- and post-intervention. The level of significance was set at 5%.

Qualitative analyses

All interviews were transcribed and translated into English, the transcripts were read and quality checked by a researcher on the team. A codebook was developed and refined in an iterative manner. The codes were grouped around themes and subthemes using ATLAS.ti v8 (ATLAS.ti Scientific Software Development; https://atlasti.com). The coding was done by two researchers separately after attaining high intercoder reliability together. Codes were organised around emergent themes and categories using an inductive approach.

Ethics approval

The study received ethics approval from the University of Ibadan Research Ethics Committee and the study protocol was registered at ClinicalTrials.gov (ID: NCT06119984).

All respondents recruited into the study were approached with respect and honor. An introductory letter stating, in plain language, the objectives, the study's design, and the rights of individuals to participate or to withdraw from participation were read to every participant prior to asking for their consent. All participants provided oral informed consent to be recruited into each part of the study including the pre-intervention (qualitative and quantitative), intervention and post-intervention (qualitative and quantitative) components of the study.

Results

The response rate for this study was 99.6% at baseline and 98.0% post-intervention. After 6 months of intervention, 38% of eligible men and women listed in the intervention communities had heard of the intervention.

Quantitative findings

A total of 1295 respondents were recruited into the study at baseline (51.5% women). At endline, a total of 1298 respondents participated in the study (50.7% women). As shown in Table 1, more women from the intervention group had higher levels of education and were from poorer households at both data collection points. As shown in Table 2, more men in the intervention arm had higher levels of education and were from poorer households than the control arm.

The intervention reached 41% and 34% of the total number of eligible women and men listed in the intervention communities respectively. Table 3 presents the intervention effects on the outcomes of interest in this study. Pre-intervention estimates of the proportion of women who had attitudes supportive of physical IPV were higher in the intervention group compared to the control (65.2% v 45.2%); however, the proportion of men who had attitudes supportive of physical IPV was higher in the control group compared to intervention (43.7% v 40.1%).The proportion of women with attitudes supportive of physical IPV in the intervention group significantly reduced from 65.2% to 35.1% at 6 months post-intervention, when compared with the reduction from 45.2% to 32.7% observed among women in the control group (DID= −0.116, p=0.039). Conversely, the proportion of men with attitudes supportive of physical IPV in both study arms increased slightly post-intervention, from 40.1% to 44.6% in the intervention group and from 43.7% to 45.8% among controls (DID= 0.015, p=0.805). This difference was not statistically significant.

The proportion of women who experienced IPV was higher in the control group compared to intervention at baseline (48.4% v 30.3%), just as the proportion of men who reported perpetrating IPV was higher in the control group compared to intervention (43.2% v 29.9%). Post-intervention, there was a significant reduction in the proportion of women who experienced IPV in the intervention group, from 30.3% to 1.2%, when compared with the reduction from 48.4% to 33.2% observed among controls (DID= −0.131, p=0.006). There was also a reduction in the proportion of men who reported perpetrating IPV in both study arms at endline, but the percentage point reduction was more in the control group (from 43.2% to 10.3%), compared with the intervention group (from 29.9% to 19.9%), even though the difference was not statistically significant (DID= −0.050, p=0.155).

Table 1: Baseline and endline characteristics of female respondents in intimate partner violence study, South-West Nigeria

Table 1: Characteristic		Baseline			Endline		
		Intervention (N=330) n (%)	Control (N=337) n (%)	p-value	Intervention (N=330) n (%)	Control (N=328) n (%)	p-value
Age (years)	≤34	174 (52.7)	164 (48.7)	0.106	179 (54.2)	120 (36.6)	<0.001***
	35–44	114 (34.6)	110 (32.6)		111 (33.6)	142 (43.3)	
	≥45	42 (12.7)	63 (18.7)		40 (12.1)	66 (20.1)	
Median age (interquartile range)		34 (27–40)			35 (28–40)		
Level of education	None	103 (31.2)	79 (23.4)	<0.001***	69 (20.9)	64 (19.5)	<0.001***
	Primary	109 (33.0)	180 (53.4)		108 (32.7)	184 (56.1)	
	Secondary	12 (3.6)	40 (11.9)		19 (5.8)	58 (17.7)	
	Tertiary	106 (32.2)	38 (11.3)		134 (40.6)	22 (6.7)	
Employment status	Employed for wages	7 (2.1)	29 (8.6)	<0.001***	25 (7.6)	40 (12.2)	0.139
	Self-employed	284 (86.1)	301 (89.3)		288 (87.3)	272 (82.9)	
	Unemployed	39 (11.8)	7 (2.1)		17 (5.1)	16 (4.9)	
Religion	Christianity	133 (40.4)	138 (40.9)	0.891	118 (35.9)	149 (45.7)	0.010*
	Islam	196 (59.6)	199 (59.1)		211 (64.1)	177 (54.3)	

Wealth index	Poorer	165 (50.0)	96 (28.5)	<0.001***	190 (57.8)	34 (10.4)	<0.001***
	Middle	70 (21.2)	125 (37.1)		103 (31.2)	86 (26.2)	
	Richer	95 (28.8)	116 (34.4)		37 (11.2)	208 (63.4)	
Decision-making on earnings	Respondent	114 (38.6)	31 (9.2)	0.030*	92 (27.9)	125 (38.1)	<0.001***
	Spouse/partner	124 (37.6)	166 (49.3)		42 (12.7)	52 (15.9)	
	Joint decision	92 (27.8)	140 (41.5)		196 (59.4)	151 (46.0)	
Alcohol use	Yes	38 (11.5)	33 (9.8)	0.471	7 (2.1)	25 (7.6)	0.001**
	No	292 (88.5)	304 (90.2)		323 (97.9)	303 (92.4)	
Partner alcohol use	Yes	46 (14.3)	82 (25.3)	<0.001***	21 (7.6)	89 (27.6)	<0.001***
	No	275 (83.7)	242 (74.7)		256 (92.4)	233 (72.4)	
Partner psychoactive substance use	Yes	5 (1.6)	12 (3.7)	0.020*	6 (1.9)	4 (1.2)	0.970†
	No	299 (98.4)	312 (96.3)		295 (98.0)	335 (98.8)	

*p<0.05, **p<0.01, ***p<0.001

† Fisher's exact test.

Table 2: Baseline and endline characteristics of male respondents in intimate partner violence study, South-West Nigeria

Characteristic	Variable	Baseline			Endline		
		Intervention (*N*=330) *n* (%)	Control (*N*=337) *n* (%)	*p*-value	Intervention (*N*=330) *n* (%)	Control (*N*=328) *n* (%)	*p*-value
Age (years)	≤34	130 (42.8)	82 (25.3)	<0.001***	60 (19.9)	40 (11.8)	0.012*
	35–44	100 (32.9)	102 (31.5)		89 (29.6)	99 (29.2)	
	≥45	74 (24.3)	140 (43.2)		152 (50.5)	200 (59.0)	
Median age (interquartile range)		39 (30–46)			45 (38–52)		
Level of education	None	74 (24.3)	62 (19.1)	<0.001***	70 (23.6)	14 (4.1)	<0.001***
	Primary	108 (35.5)	130 (40.1)		97 (32.2)	185 (54.6)	
	Secondary	33 (10.9)	80 (24.7)		20 (6.6)	63 (18.6)	
	Tertiary	89 (29.3)	52 (16.1)		114 (37.9)	77 (22.7)	
Employment status	Employed for wages	55 (16.9)	45 (14.8)	0.219	19 (6.3)	24 (7.1)	0.907
	Self-employed	253 (78.1)	251 (82.6)		267 (88.7)	297 (87.6)	
	Unemployed	16 (4.0)	8 (2.6)		15 (4.9)	18 (5.3)	
Religion	Christianity	80 (26.7)	138 (44.2)	<0.001***	135 (47.4)	139 (41.4)	0.134
	Islam	220 (73.3)	174 (55.8)		150 (52.6)	197 (58.6)	
Wealth index	Poorer	96 (31.6)	98 (30.3)	0.004**	146 (48.5)	30 (8.9)	<0.001***
	Middle	151 (49.7)	130 (40.1)		99 (32.9)	100 (29.5)	
	Richer	57 (18.8)	96 (29.6)		56 (18.6)	209 (61.7)	
Decision-making on earnings	Respondent	146 (48.0)	198 (61.3)	<0.001***	211 (70.3)	180 (53.1)	<0.001***
	Spouse/partner	20 (6.6)	40 (12.4)		73 (24.3)	109 (32.2)	
	Joint decision	138 (45.4)	85 (26.3)		16 (5.3)	50 (14.7)	
Alcohol use	Yes	106 (34.9)	118 (36.4)	0.685	92 (30.6)	89 (26.3)	0.227
	No	198 (65.1)	206 (63.6)		209 (69.4)	250 (75.7)	
Psychoactive substance use	Yes	45 (14.8)	63 (19.4)	0.123	46 (15.3)	24 (7.1)	0.001**
	No	259 (85.2)	261 (80.6)		255 (84.7)	315 (92.9)	

*p<0.05, **p<0.01, ***p<0.001

Table 3: Estimates of intervention effect on outcomes in intervention versus control communities, intimate partner violence study, South-West Nigeria

Variable		Baseline		Endline		DID (crude) (*p*-value)	DID (adjusted)† (*p*-value)
		Intervention (*N*=330) *n* (%)	Control (*N*=337 *n* (%)	Intervention (*N*=330) *n* (%)	Control (*N*=328) *n* (%)		
Primary outcome	Women's attitudes supportive of physical IPV	208 (65.2)	150 (45.2)	116 (35.1)	104 (32.7)	–0.169 (0.002**)	–0.116 (0.039*)
	Men's attitudes supportive of physical IPV	120 (40.1)	134 (43.7)	132 (44.6)	120 (45.8)	0.023 (0.692)	0.015 (0.805)
Secondary outcome	Experiences of IPV (women)	100 (30.3)	163 (48.4)	4 (1.2)	109 (33.2)	–0.140 (0.002**)	–0.131 (0.006**)
	Perpetration of IPV (men)	91 (29.9)	140 (43.2)	60 (19.9)	35 (10.3)	0.229 (<0.001***)	–0.050 (0.155)

*p<0.05, **p<0.01, ***p<0.001

† Variables used in the adjusted DID are respondent's education, partner's use of alcohol, partners involved in fights and women's participation in decisions on household purchases.

DID, difference-in-differences. IPV, intimate partner violence.

Qualitative findings

Four overarching themes emerged from analysis of the qualitative data: awareness of various forms of IPV, attitudes to physical violence, triggers for IPV, and community members' perception of the intervention. Quotes from the respondents were used to illustrate the themes identified. These findings provided further insight into the surrounding environment and social factors influencing participants' behaviours pre- and post-intervention.

Respondents' awareness of intimate partner violence in the study communities

Many respondents, men and women across different age groups, felt that IPV was common in both intervention and control sites at baseline, as it is elsewhere in the world:

> *It [IPV] happens everywhere in the world, and we also have such cases here. Misunderstanding, fighting etc., it happens. (in-depth interview, male Islamic cleric aged 60 years, baseline control group)*

> *Physical and emotional IPV is very common. There are some that the husband and wife would be in the same house, and they wouldn't talk to one another, each person would be doing their own thing, and there are some that would rain insults on each other. (in-depth interview, female trader aged 49 years, baseline intervention group)*

Attitudes supportive of physical violence

Many respondents, in both the control and intervention group, agreed that a man is justified in physical violence towards his female partner for a variety of reasons, such as if the woman neglects the children or does not take care of the home:

> *He has the right to beat her because that is what we are suffering for … how will a woman not take care of her child? All our suffering is because of our children; may God not let us suffer in vain. If the husband should beat her, he is not at fault. (focus group discussion, female trader aged 40 years, baseline intervention group)*

> *Yes, she should be punished, how can a woman not take care of the home? Does she expect the man to come home to bathe the children, wash clothes, fetch water, or cook? How can a woman not take care of the home when the husband is performing his duties? For any woman who does not take care of the home, the husband can do whatever he likes. (focus group discussion, male businessperson aged 28 years, baseline control group)*

Triggers for intimate partner violence

Respondents highlighted some possible factors that could trigger violence. These include the change in women's social status, the economic situation of the country, and the power dynamic between women and men.

> *Women are educated now, so when they object to the opinion of a man that has controlling issues, problems automatically erupt. (in-depth interview, female health extension worker aged 45 years, baseline intervention group)*

> *You see what we have in this community, our men do not have standard jobs, if they give birth to four children, they wouldn't be able to take care of them, it is we the women that would try to be managing, but when it gets to the point that we can no longer manage we accuse the man that isn't he the father of the children, he should also provide for them, that is where the dispute will start from. (focus group discussion, female trader aged 25 years, baseline intervention group)*

> *Men in this community believed that women have no rights, but if we look at it from the civil point of view, I can ascertain that we have equal rights, but men don't agree to that in this our community. (in-depth interview, male community youth leader aged 38 years, baseline control group)*

Community members' perceptions of the intervention

Following exposure to the intervention, respondents from the intervention group reported that they perceived a reduction in the occurrence of IPV in their community:

> *There is a reduction in the occurrence of IPV. I am happy about it … how it happened in a little way was that when you [referring to the researcher] came around, you witnessed about two cases which I told you to have a seat and help me resolve. Still, about the time you helped us resolve it when you came and gave us a training on it, it has been different such that I have rest in my palace. Thank you. (in-depth interview, male community head aged 58 years, endline intervention group)*

> *We can see that what you're doing [referring to the research team] has made things much better. Your intervention with the representatives [model couples] we appointed for you, without sugar-coating our words, we can see is producing good results, and we are having plenty of successes thereof. (in-depth interview, male religious leader aged 48 years, endline intervention group)*

Discussion

The current study sought to assess the effect of a community mobilisation intervention on attitudes supportive of physical IPV, women's experiences of IPV and men's perpetration of IPV in rural communities of South West Nigeria. Intervention impacts were observed in the expected direction for most outcomes assessed. However, there were similar changes in the control communities during this period, which may be due to other exogenous efforts. It is not unusual for multiple actors to intervene in the same area, especially with respect to a public health concern like IPV, and particularly during the COVID-19 pandemic, where there were reports of increases in the occurrence of IPV[47,48].

This study showed a reduction in the proportion of women who had attitudes supportive of physical IPV in the intervention sites compared to the control sites, but the intervention had no effect on men's attitudes towards IPV. The qualitative findings suggest that there is unequal power distribution within communities, as the men believed that they were superior to women. As such, these beliefs may have been difficult to change over the short intervention period of this study. A number of community mobilisation interventions in recent times have reported mixed results with respect to lowering the acceptance of IPV among men

and women. While the SASA! project demonstrated success in significantly lowering the acceptance of IPV among women[27,49], others, like the TEVAW intervention in Tanzania and a cluster randomised trial in South Africa, reported success in lowering the acceptance of IPV among men, even though both men and women were represented in the intervention[35,50]. The level of success in reducing the acceptance of IPV seems to depend on which gender was more involved and exposed to the intervention, as is the case in the current study, where more women than men were exposed to the interventions[34,49,50].

This study also found a significant reduction in the proportion of women who experienced IPV in the intervention sites compared to the control sites. This was corroborated by the findings of the qualitative data, which suggested a reduction in reports of occurrence of IPV incidents in the communities. However, the intervention's effect on men's perpetration of IPV was not significant. The findings of the current study are similar to those of the SHARE project in Uganda and the COMBAT RRS in Ghana, where there were significant reductions in the experiences of IPV among women but no significant impact on men's perpetration of IPV[33,35]. It is important to remark that the intervention for the current study and the 6-month post-intervention study were conducted during the first and third waves of the COVID-19 pandemic in Nigeria, respectively. During these periods, there was heightened anxiety and fear, as well as reports of increased occurrence of IPV[51]. In response to these findings, there was a national spotlight on IPV, starting during the COVID-19 pandemic, and coinciding with the intervention phases for this study[52]. Apart from this national spotlight on IPV, the huge reduction observed in the prevalence of IPV reported by women could also be due to the effect of a radio series that was airing, in both the intervention and control sites, at the same time the current study intervention was rolled out. A combination of the current study and other exogenous interventions could be responsible for the drastic change in women's experiences of IPV in the intervention group, while those other interventions could be responsible for the slight decrease in women's experiences of IPV in the control group.

It is not clear why there is a difference in reporting of perpetration of violence by men and experiences of violence by women. A point to note is that this intervention was evaluated by conducting two cross-sectional surveys, hence it should be understood that the surveys did not follow up the same men and women[34]. Furthermore, the men and women interviewed in this study, although married or cohabiting, were not interviewed as couples and this effect may have been moderated by any of the multifactorial factors associated with IPV[11]. It is also possible that the results of the current study show lesser effect on men because of the difficulty in involving men in intervention activities owing to their economic activities, an occurrence that has been reported by another intervention with similar results in Africa[33].

This study was designed and delivered on the premise that violence prevention strategies must address the socio-cultural contexts in which IPV occurs[34]. Women's risk of experiencing IPV and men's risk of perpetrating IPV are strongly linked to the acceptability of physical violence against women to those involved and to those of their community, particularly for those living in rural communities, where there are stronger ties to traditional norms and unequal power distribution[26,27]. The evidence presented in the current study lends credence to the fact that community mobilisation has the potential for community-level effects on attitudes toward IPV and the prevalence of IPV. Furthermore, engaging community leaders and community health workers who were trusted by members of the community, as well as the multi-component nature of this intervention, were key lessons for future interventions in rural communities.

The intervention in the current study was successfully delivered, as was attested to by the community members during the qualitative interviews/focus group discussions. Furthermore, the design of the intervention and its implementation were informed by prevailing evidence that suggests a possible intervention impact. The study obtained promising results but also had some limitations, within which the estimates of the intervention effect should be considered. First, the study was based on self-reported experience and perpetration of IPV, hence it may be subject to recall and/or social desirability biases. Second, the COVID-19 pandemic and the subsequent non-pharmaceutical measures imposed by the Nigerian government was an external interruption to the implementation of intervention activities. This connotes that levels of intervention exposure might not have been optimum for deeply entrenched attitudes and behaviours as initially planned. Furthermore, the time for intervention to change behaviours was short (6 months), hence results should be seen as short-term effects of the intervention. Finally, other interventions may have affected the results of this study, but the reduction in women's experiences of and attitudes towards IPV in the intervention group suggest that this study has contributed significantly to these outcomes.

Conclusion

This trial demonstrates the potential of a community mobilisation intervention in reducing the proportion of women who had attitudes supportive of IPV and experience IPV in the previous year. The study has confirmed that IPV is preventable and that social norms can shift. It demonstrated community mobilisation intervention as a strategy that could be replicated, tested in different settings and could help accelerate progress towards achieving gender equality and ending all forms of violence.

The findings of this trial highlight the need for more interventions in rural communities of Nigeria, where the prevalence and acceptance of IPV is higher. These interventions will benefit from the rich experience of community leaders, community health workers and other existing community level structures that can support the health and wellbeing of rural dwellers.

Further research is needed to improve the current design and implementation of IPV prevention interventions, aligning them with available evidence to prevent and ultimately end IPV. More studies are also needed in Nigeria, and in other low- and middle-income countries in particular, to understand how interventions that empower women in rural communities affect their help-seeking behaviours in the event of IPV. This is essential as IPV is perpetrated within cultural and societal contexts, and these need to adequately guide interventions. Furthermore, community mobilisation interventions implemented over a longer period of time, with particular emphasis on men, may contribute to better outcomes than those found within the current study.

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Conflicts of interest

The authors declare no conflicts of interest.

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