

Husband Engagement and Antenatal Care Utilization among Married Adolescent Girls in Nigeria: Findings from an Implementation Science Study

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Introduction

In Northern Nigeria, poor maternal and child health outcomes persist due to limited access to healthcare services. This study explored the critical role of husband support in enhancing decision making and access of antenatal and postnatal health services for adolescent mothers.

Objectives

To assess the effectiveness of a demand creation intervention called ANC gallery that creates relevance of antenatal care fostering their support for their pregnant wives to access timely and comprehensive care consistently.

Methodology

A mixed method study consisting of a survey with a pre-post quasi-experimental design involving both comparison and intervention cohorts, a feedback survey with husbands involved in the ANC gallery, routine analysis of health management information system data and a qualitative component using the qualitative impact protocol

Results

The study demonstrated that 75% of husbands who participated in the ANC gallery declared their intention to attend ANC with their wives. Further, 54% of pregnant adolescent girls attending their fourth ANC visit were accompanied by their husbands. Significantly more girls in the intervention group reported that their husbands believed ANC was necessary, compared to the control group (96.3% vs. 73.2%; $p=$). Fewer adolescent girls reported lack of support from their husbands at the 3-month follow-up in the intervention group compared to the intervention group (4.2% vs. 13.5%).

Conclusion

The ANC Gallery Session has shown good promise at empowering husbands to support their adolescent wives' access to ANC.

Keywords: Partner-empowerment, Antenatal care, Adolescent-mothers, Gender-roles.

Extended Abstract

Background:

Reducing maternal mortality is a pressing global health priority. Despite efforts to improve maternal health, Nigeria continues to grapple with alarmingly high maternal mortality ratios (MMR), with a staggering 576 deaths per 100,000 live births, exceeding the global average of 211 deaths per 100,000 live births by far (Ade-Ojo et al., 2022). The country's MMR is also characterized by a stark regional disparity, with the northern region bearing the brunt of this crisis. For instance, MMR in the Northeast is 1549 deaths per 100,000 live births, compared to 166 deaths per 100,000 live births in the Southwest (Wellay et al, 2018). In Nigeria, diverse factors contribute to the high MMR but early marriage and female illiteracy do so significantly while also contributing to many other adverse maternal and child health outcomes. In northern Nigeria, nearly half of women are married before their 15th birthday, while 78% are married before the age of 18 (Ewepu, 2023). Adolescent mothers, lacking in knowledge and experience, are 35-55% more likely to give birth to premature and low birth weight children, and their infants face a 73% higher mortality risk compared to those born to older mothers (Osakinle and Tayo-Olajubutu, 2017).

Efforts to address this crisis such as healthcare worker training, women's empowerment, and infrastructure improvements have been adopted, but adverse maternal and child health outcomes still persist. Economic factors, such as wealth, employment status, distance to healthcare facilities, and insurance status (Wellay et al, 2018), as well as non-economic factors, including age, education, residence, religion, ethnicity, birth order, and marital status (Arthur, 2012), all in shaping utilization of life saving interventions such as antenatal care (ANC).

However, in the patriarchal societies of northern Nigeria, men often wield significant influence over their partners' healthcare decisions, including ANC (Gibore and Bali, 2020). Male partners, who frequently are the primary decision-makers and breadwinners, either facilitate or hinder access to ANC services. Crucial attributes such as the need for permission, company, or financial support, all influenced by male partners, serve as barriers to ANC utilization (Muloongo et al, 2019).

Our study sought to explore the influence of husband support in enhancing ANC utilization among married adolescent mothers in northern Nigeria. By involving men in healthcare decision-making and encouraging their support, this study aimed to harness their influence and develop a more comprehensive approach to improving access to essential health services. The study is grounded in the social support, gender roles and health behavior change theories. The study aims to demonstrate how redefined traditionally gendered roles in ANC decision-making, empowers husbands to play a proactive role in their partners' well-being, and the shifts in men's attitudes towards ANC along the pathway for improving maternal and child health outcomes.

Objectives: To assess the effectiveness of a user-centered demand creation intervention called ANC Gallery at influencing husbands of adolescent girls to foster support for their partners' access to ANC.

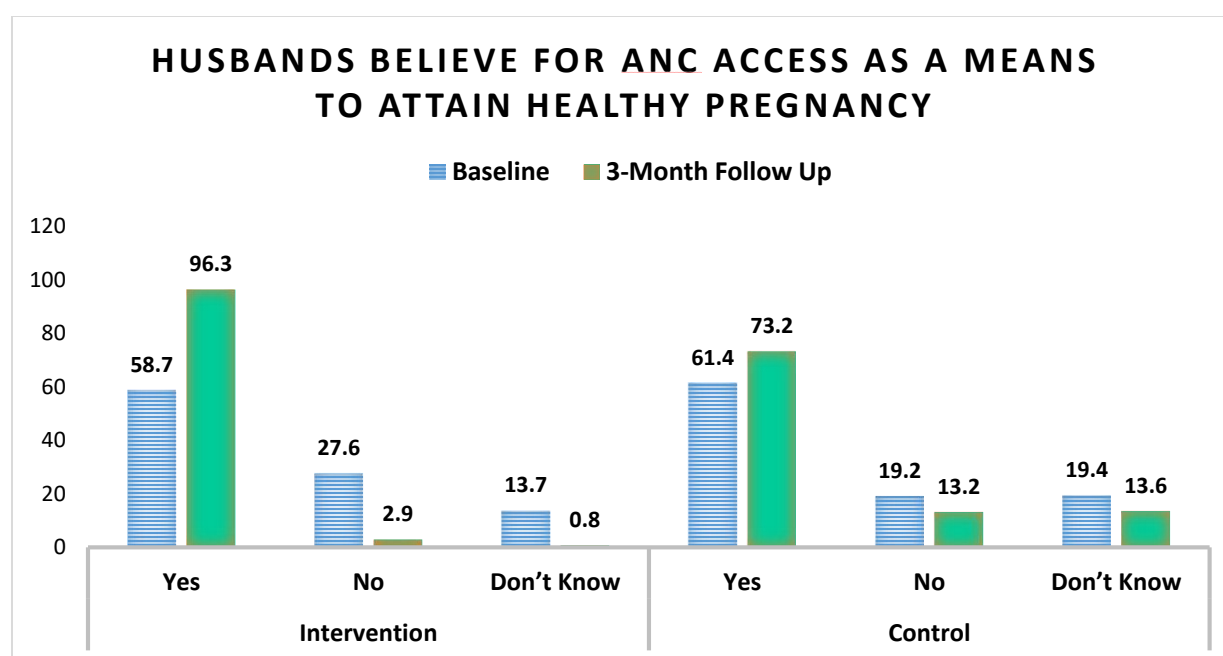
Intervention: The ANC Gallery, is an intervention component of the Matasa Matan Arewa intervention by the Adolescents 360 project in four states in northern Nigeria- Kaduna, Jigawa, Kano and Nasarawa. It was developed using human centered design drawing on insights garnered from insight research involving husbands. It consists of community sessions facilitated by trained male interpersonal communication agents (MIPCA). Sessions target husbands of adolescent girls aged 15-19 and aims to shift men's attitudes and knowledge towards ANC by emphasizing its health benefits and redefining their gendered roles in ANC decision-making. The sessions foster a sense of responsibility and empower men to take a proactive role in their partners' and children's well-being, ultimately enhancing understanding of ANC's significance, facilitating meaningful peer connections, and motivating husbands to accompany their wives to ANC appointments or encourage them to attend independently. Husbands are issued with referral cards to share with their wives who can redeem them at ANC facilities supported by the project. At the end of session facilitator ask husbands on their willingness to support and attend ANC with their spouse as part of the action point during session wrap up.

Methodology: The mixed method study employed a quasi-experimental design. It comprised of a quantitative survey adolescent girls aged 15-19 who were pregnant or were at risk for pregnancy. The intervention group included girls receiving the intervention component involving adolescent girls and a control group involving girls- receiving the current standard of ANC care by the Ministry of Health guidelines. The survey involved 1090 married AGYW (545 control and 545 intervention). An interviewer administered survey tool was fielded at in face-to-face sessions at recruitment and three months thereafter. The survey was complemented with quantitative routine data obtained through abstraction from the Nigeria health management information systems (HMIS) registers for a six month's duration after intervention started. Feedback was also collected from men who participated in the ANC gallery session about their intention to accompany their wives for ANC sessions while 15 in-depth interviews with men who participated in the ANC gallery were also conducted (these will be reported later). Key effectiveness metrics include the husbands' intention to attend ANC with their wives, the proportion of AGYW who report their husbands believe ANC is necessary, the proportion of AGYW who report lack of support from their husbands, the proportion of husbands who accompany their pregnant spouses to clinic visits, the proportion of AGYW who attend their 4th ANC visit with their husbands, and trends in ANC attendance among pregnant girls aged 15-19. Data was initially analyzed using descriptive statistics. Thereafter independent t-tests for multiple comparisons between time points and groups were explored. Furthermore, Mann-Whitney U test was used to analyze the routine program data. The three data sources were triangulated to provide a comprehensive evaluation of the intervention's effectiveness.

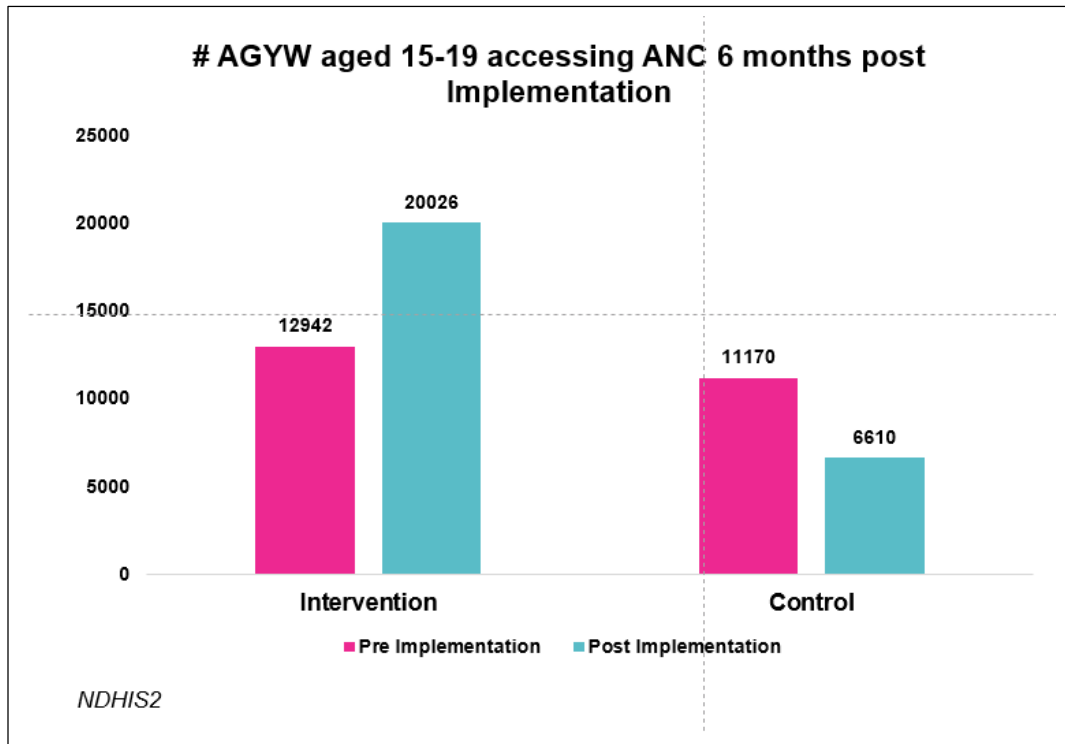
Results: At the 3-month follow-up we observed a significantly higher increase in the proportion of adolescent girls reporting that their husbands believed ANC was necessary for attaining a health pregnancy in the intervention group (96.3% from 58.7% at baseline) compared to the control group (73.2% from 61.4% at baseline). This difference was statistically significant at $p < 0.001$. The

intervention group reported a steeper decline in the proportion of pregnant adolescent girls who reported that their husbands did not support them from 27.5% at baseline to 4.2% at the 3-month follow-up compared to a smaller reduction in the control group from 14.6% at baseline to 13.5% at 3-month follow-up. This observation was statistically significant at $p < 0.001$. The proportion of adolescent girls who reported that their husbands accompanied them for the ANC clinic rose from 6.7% at baseline to 17.5% at the 3-month follow-up compared to change from 6.1% at baseline to 11.9% in the control group at the 3-month follow-up. This finding corroborated the routine HMIS data which demonstrated that 54% of the pregnant girls attending 4th ANC visit were accompanied by their husbands. Between December 2023 to June 2024, the health facilities in the intervention geographies showed an increase of the ANC visits involving pregnant girls from 12,942 in the pre-implementation period to 20,026 in the post-implementation period. Contrastingly, the health facilities in the control geographies reported decreased ANC visits from 11,170 in the pre-implementation period to 6,610 in the post-implementation period. The difference between the groups was statistically significant ($p\text{-value} < 0.001$), indicating a positive effect of the intervention.

Conclusion: The ANC Gallery Session has demonstrated good promise as an effective intervention in empowering husbands married to adolescent girls to support their partners' access to ANC services in northern Nigeria. The observed changes imply that husbands are shifting their ability to provide expanded material, emotional and decision making support to their pregnant spouses which is vital for consistent adherence to the prescribed standards of care for pregnant women. These findings suggest that current ministry of health guidelines should incorporate male partner engagement components as part of ANC to foster improved service utilization which is a prerequisite for improved maternal and child health outcomes.



		Ways husband supports their spouses														
		Baseline								3-months follow up						
		He does not support me	Money	Encouragement	Transportation	Accomp anying me to the clinic	Helps me with chores at home	Other	Don't know	He does not support me	Money	Encoura gement	Transpor tation	Accomp anying me to the clinic	Helps me with chores at home	Other
Intervention	n(%)	127 (27.5%)	183 (39.7%)	165 (35.8%)	35 (7.6%)	31 (6.7%)	163 (35.4%)	15 (3.3%)	12 (2.6%)	15 (4.2%)	217 (60.1%)	214 (59.3%)	67 (18.6%)	63 (17.5%)	164 (45.4%)	22 (6.1%)
		58 (14.6%)	163 (41.2%)	146 (36.9%)	64 (16.2%)	24 (6.1%)	137 (34.6%)	51 (12.9%)	8 (2.0%)	44 (13.5%)	164 (50.2%)	168 (51.4%)	69 (21.1%)	39 (11.9%)	141 (43.1%)	35 (10.7%)
Control	n(%)	(14.6%)	(41.2%)	(36.9%)	(16.2%)	(6.1%)	(34.6%)	(12.9%)	(2.0%)	(13.5%)	(50.2%)	(51.4%)	(21.1%)	(11.9%)	(43.1%)	(10.7%)
p-value		<0.001	0.663	0.744	<0.001	0.693	0.816	<0.001	0.573	<0.001	0.009	0.037	0.403	0.042	0.542	0.029



Discussion

The ANC Gallery intervention demonstrates a significant shift in husbands' attitudes and behaviors towards ANC, underscoring the critical role of male engagement in improving adolescent girls' access to ANC services. By empowering husbands to take a proactive role in their partners' and children's well-being, the intervention addresses a crucial gap in current ANC guidelines, which often overlook the influence of male partners on women's healthcare decisions. The observed improvements in husbands' beliefs, support, and accompaniment to ANC visits have important implications for maternal and child health outcomes, suggesting that integrating male engagement components into ANC services could lead to increased service utilization and better health outcomes. Furthermore, the intervention's effectiveness in a context where patriarchal norms often limit women's autonomy highlights the potential for male engagement strategies to transform gender dynamics and promote more equitable healthcare decision-making. As such, the findings of this study support the integration of the ANC Gallery intervention into existing health systems and inform the development of evidence-based policies and programs aimed at improving maternal and child health outcomes in northern Nigeria and similar contexts.

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