

Full Length Research Paper

Determinants of Male Partner Involvement in Antenatal care in Semi-Urban Zimbabwe: Implications for Sustainable Development Goals 3 and 5

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Abstract

Male partner involvement in antenatal care (ANC) is critical for reducing maternal mortality, advancing gender equity, and improving maternal and child health outcomes, yet it remains low in many low-income settings. This study aimed to determine predictors of male partner involvement among women attending ANC services at a semi-urban clinic in Gwanda District, Zimbabwe. A cross-sectional study was conducted among 184 systematically sampled women using structured researcher-administered questionnaires. Data were analysed using SPSS version 25. Descriptive statistics were used to summarise participant characteristics. Associations between male involvement and independent variables were assessed using Pearson's chi-square test and Fisher's exact test where expected cell counts were <5 . Statistical significance was set at $p \leq 0.05$. Overall, 44.6% of male partners accompanied their partners for ANC appointments. Significant predictors of male partner involvement were cohabitation with the partner ($p = 0.02$), male partner's knowledge of ANC benefits ($p < 0.001$) and awareness of scheduled ANC contact dates ($p < 0.001$). Main barriers to participation were work commitments (63.6%), insufficient knowledge regarding the importance of ANC (41.8%), and long waiting times at ANC clinics (39.1%). The study concludes that male partner involvement in ANC demands targeted strategies that enhance men's knowledge of ANC benefits and awareness of appointment dates, with particular focus on cohabiting couples. Collaboration among health systems, communities and work places through inclusive policies and community interventions could be used to engage men in ANC while removing barriers that hinder their higher participation. Future research should collect primary data from men to inform strategies that increase men's involvement in reproductive health services, thereby promoting family health and well-being and advancing gender equity in support of the Sustainable Development Goals.

Keywords: Male partner involvement; antenatal care; determinants; maternal mortality; gender equity; Gwanda District; Zimbabwe, sub-Saharan Africa.

Introduction

According to the World Health Organization (2024), an estimated 287 000 maternal deaths occurred worldwide in 2020, with developing countries accounting for a disproportionate 95% and Sub-Saharan Africa alone accounting for approximately 70%. In Zimbabwe, the latest nationally representative maternal mortality ratio (MMR)

remains high, at an estimated 363 deaths per 100,000 live births in 2022 (UNICEF, 2023). To address this, Sustainable Development Goal (SDG) 3.1 aims to reduce the global MMR to less than 70 per 100,000 live births by 2030. Recognising the critical role of male partner involvement in improving maternal well-being, global efforts have identified it as a key strategy to achieve this goal (Gopal et al., 2020). However, despite the acknowledged benefits, engaging men in maternal health issues and creating space for their involvement remains a significant

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challenge, pointing out the need for targeted interventions to increase their involvement and ultimately reduce maternal mortality.

In many African countries including Zimbabwe, male partner involvement in antenatal care (ANC) remains low, largely due to traditional patriarchal societies where men hold decision-making power and control over household resources. Suandi et al. (2020) note that men's dominance extends to healthcare, where they typically make the decisions to seek care. Furthermore, cultural norms in some communities view men's involvement in their partners' pregnancies and delivery care as a sign of weakness and embarrassing, making it unusual for men to accompany their partners to ANC appointments (Gessese et al., 2024). Mantula and Toefy (2023) highlight the perceived traditional gender roles and a lack of knowledge and opportunities for involvement in maternal care as significant barriers to male partner involvement in most African cultures. Similarly, Sao et al. (2024) observe that manifestations of masculinity combined with institutional challenges create multiple barriers that dissuade men from attending ANC with pregnant partners, including that men are not directly addressed by providers and are sometimes denied access to pregnancy consultations.

Male involvement in ANC is critical because men often play a decisive role in family decision-making, directly influencing pregnancy outcomes. Bagenda et al. (2021) emphasise that excluding men from ANC means missing opportunities to reduce maternal and neonatal mortality, particularly in developing countries where men serve as heads of families. This view is expanded by Van Laar et al. (2024), who conceptualise men in reproductive health as partners providing emotional and practical support, as clients accessing services, and as agents of positive change advocating for healthy behaviours and promoting a supportive environment for reproductive health and well-being. Dzobo and Dzinamarira (2025) concur that recognising men as critical key stakeholders and allies can empower them to promote gender equality and better health outcomes through collaborative efforts with women, healthcare providers, and communities. Such collaboration yields tangible benefits.

Muheirwe and Nuhu (2019) note that male involvement in ANC facilitates engagement with healthcare providers, enabling men to acquire health education, access services, and make informed family healthcare decisions as a critical component of efforts to improve societal health outcomes. This aligns with Baykernagn et al. (2026) who found that male attendance at ANC with their pregnant partners significantly increases utilisation of institutional delivery and postnatal check-up attendance. Suandi, et al. (2020) further highlight that it increases use of family planning services and condoms, sexually transmitted infections (STI) screening and testing, health education on recognising danger signs in pregnancy, and promotion of

good maternal nutrition for pregnant women. Framing men as part of the solution rather than the problem motivates programme designs that engage them in maternal health, aligning with SDG 3 targets to reduce maternal and infant mortality by 2030.

The social significance of male involvement in ANC is underscored by its potential to yield numerous beneficial societal impacts. These include improved health behaviours, such as enhanced ANC adherence and informed decision-making regarding reproductive health services (Gibore et al., 2019). Ultimately, this can reduce maternal and neonatal mortality and improve health outcomes. As Van Laar et al. (2024) further note, the disproportionate power and control men often wield over resource access and distribution predicts their families' or partners' safety, health, and overall well-being, emphasising the importance of their involvement in women's reproductive health, including joint participation in ANC.

Suandi et al. (2020) build on this notion, arguing that encouraging men to participate in ANC can challenge traditional gender roles and promote shared responsibilities, contributing to the achievement of SDG 5, which advocates for gender equality. Gopal et al. (2020) further observe that male involvement in ANC can promote stronger family bonds and community cohesion, promoting a culture of mutual support and shared responsibility for maternal and child health, ultimately contributing to more stable and supportive societies. Addressing societal barriers that hinder male involvement in ANC, such as rigid gender norms and lack of awareness facilitates mitigation of adverse impacts such as poor health outcomes and gender inequalities, aligning with the SDGs' commitment to leaving no one behind.

This study posits that male involvement in ANC can have a profound impact on societal outcomes, particularly in enhancing maternal and child health. By examining the complex interplay between male partner involvement, antenatal care, and health outcomes, this evaluation seeks to provide actionable insights for stakeholders, policymakers, and healthcare providers, thereby facilitating the creation of more effective and sustainable interventions that promote maternal and child health, addressing gender-based inequalities, and promoting more inclusive and supportive communities.

Few studies have quantified predictors of male ANC attendance in semi-urban Zimbabwe since 2016. This study addresses that gap by examining factors associated with male partner involvement in ANC in a semi-urban setting. Findings can inform interventions to reduce barriers to male participation and promote gender equity in maternal health. The research is grounded in a vision of a society that values health, well-being, and gender equity, where men and women can participate equally in ANC, free from barriers that hinder men from active involvement. The underlying values of the research are guided by the

principles of equity, inclusivity, mutual respect, and a profound belief in the inherent worth and dignity of every individual as emphasised by Van Laar et al. (2024). These values are universal and aligned with the principles of human rights and the SDGs, particularly SDG 3, which emphasises the importance of ensuring health and well-being for all. By situating this research within the framework of SDGs, the study aims to contribute to a broader discussion on the importance of promoting male involvement in reproductive health to promote gender equity in the pursuit of optimal quality of life, as advocated by Dzobo and Dzinamarira (2025).

Materials and Methods

The study employed a cross-sectional design; therefore, causality cannot be inferred. The minimum sample size was determined using Cochran's formula for a single proportion:

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

where $Z=1.96$ for a 95% confidence interval, $P = 0.22$ based on the proportion of women tested for HIV with their male partners in a similar study in Zimbabwe by Makoni et al. (2016), and margin of error (ME) = 0.06. A 6% margin of error was chosen as a pragmatic balance between statistical precision and feasibility, given resource and time constraints. This margin of error is acceptable for exploratory quantitative studies estimating population proportions (Kanda Data, 2024), and reduced the required sample size from 263, which would have been needed for $ME=0.05$, to 184.

Systematic sampling was used to select respondents at Phakama Polyclinic between September and November 2023. Inclusion criteria were: pregnant women aged 18-45 years, attending ANC at Phakama Polyclinic during the study period, and residing in the clinic's catchment area. Women who were critically ill or attending for emergency obstetric care only were excluded. Starting with a randomly selected number between 1 and 3 on each data collection day, every third woman arriving for ANC services was selected until the target sample of 184 was reached. Six women declined to participate, yielding a response rate of 96.8%.

Male involvement was defined as the male partner physically attending at least one ANC visit, as reported by the woman. Data were collected using a researcher-administered questionnaire, and analysed using SPSS version 25. The questionnaire was developed based on a literature review. Content validity was assessed by two maternal health experts and a biostatistician from the National University of Science and Technology. The instrument was pretested among 10 women attending ANC services at the health facility two weeks before the

main study. Pretest participants were assigned unique codes and were excluded from the sampling frame used for the main study to avoid contamination. Their data were not included in the final analysis. Based on pretest findings, one item stating "Is your partner aware of ANC services?" was modified to "As far as you know, is your partner aware that pregnant women are advised to attend clinic check-ups during pregnancy?" The final questionnaire is provided as Supplementary File 1.

Descriptive statistics were used to summarise participant characteristics. Bivariate analysis was performed using Pearson's chi-square test. Fisher's exact test was used where expected cell counts were <5 . Statistical significance was set at $p \leq 5$.

Ethical considerations

Ethical approval for this study was obtained from the National University of Science and Technology Institutional Review Board (NUST IRB), approval number NUST IRB/2023/44. Institutional permission to conduct the study was also granted by Phakama Polyclinic, reference number Admin/24. Written informed consent was obtained from all participants prior to data collection. Participants were informed of the study purpose, procedures, potential risks and benefits, and their right to withdraw from the study at any time without penalty. Confidentiality was maintained by using participant identification codes instead of names, and all data were stored in a password-protected database accessible only to the research team.

Results and Discussion

Table 1 shows that the majority of the participants [73.4%, $n = 135$] were currently living with their partners, a crucial factor that facilitates male partner involvement in ANC. Notably, a significant association was found between currently living with one's partner and male partner involvement in ANC [$\chi^2 = 5.3$, $df = 1$, $p = 0.02$].

However, the level of male partner involvement in ANC was found to be relatively low, with only 44.6% [$n=82$] of participants reporting that their male partners attended ANC services with them [Table 2]. This finding is similar to the pooled prevalence of male partner ANC involvement of 45.7% reported across eight sub-Saharan African countries in Demographic and Health Surveys (Jennings et al., 2014). Country-specific percentages ranged as follows: Burundi (18.2%), Senegal (32%), Zimbabwe (32%), Malawi (41.0%), Mozambique (44.2%), Burkina Faso (45.2%), Uganda (49.7%), and Rwanda (86.8%). Due to Rwanda's history of civil unrest, women may have needed male companionship for safety, which could explain the country's high rate of male partner accompaniment. Notably, the 44.6% observed in the current study appears higher than the 32% previously reported for Zimbabwe in the same 2014 analysis. While

Table 1: Socio demographic characteristics and bivariate associations (n=184).

Variable	Mean (SD)	Male involvement		χ^2	df	P
		Yes	No			
Age of participants	25 (5.2)	24.5 (5.2)	25.4 (5.2)			0.24 ^b
Age of partner	30.1 (6.4)	29.7 (6.5)	30.5 (6.4)			0.44 ^b
	n (%)					
Place of residence						
Urban	35 (19)	15 (18.3)	20 (19.6)	0.49	2	0.80
Rural	138 (75)	61 (74.4)	77 (75.5)			
Mine compounds	11 (6)	6 (7.3)	5 (4.9)			
Marital status						
Single	41 (22.3)	15 (18.5)	26 (25.5)	3.5		0.17
Married	139 (75.5)	66 (81.5)	73 (71.6)			
Divorced	4 (2.1)	0	3 (2.9)			
Currently living with partner						
Yes				5.3	1	0.02
No	135 (73.4)	67 (81.7)	68 (66.7)			
	49 (26.6)	15 (18.3)	34 (33.3)			
Parity						
Para 0	52 (28.3)	22 (26.8)	30 (29.4)	1.59		0.93
Para 1	61 (33.2)	27 (32.9)	34 (33.4)			
Para 2+	71 (41.6)	33 (40.2)	40 (43.4)			
Employment status						
Formally employed	23 (12.5)	13 (15.9)	10 (9.9)	1.46	2	0.48
Self employed	81 (44.0)	35 (42.7)	46 (45.5)			
Unemployed	80 (43.4)	34 (41.5)	45 (44.6)			
Level of education						
Primary and below	13 (7.1)	7 (8.5)	6 (5.9)	0.54	2	0.75
Secondary	140 (76.1)	62 (75.6)	78 (76.5)			
Tertiary	31 (16.8)	13 (15.9)	18 (17.6)			
Partner level of education						
Primary and below	18 (9.8)	7 (8.5)	11 (10.8)	0.57	2	0.49
Secondary	138 (75)	61 (74.4)	77 (75.5)			
Tertiary	28 (15.2)	14 (17.4)	14 (13.7)			
Distance to clinic						
Less than 5	139 (75.5)	62 (75.6)	77 (75.5)	1.02	2	0.65
5-10 km	24 (13.0)	9 (11.0)	15 (14.7)			
>10 km	21 (11.4)	11 (13.4)	10 (9.8)			
Monthly household income (USD)						
100 and below	78 (42.4)	36 (43.9)	42 (41.2)	1.25	2	0.53
101 – 500	56 (30.4)	27 (32.9)	29 (28.4)			
Above 500	50 (27.2)	19 (23.2)	31 (30.4)			

b = t-test results

this descriptive difference may suggest a trend toward increased male involvement over time, potentially linked to growing adherence to WHO guidelines on male

participation in ANC, we did not test whether this difference is statistically significant. In contrast, studies in Tanzania reported higher male atten-

dance rates of 56.9% to 63.4% (Gibore et al., 2019; Kabanga et al., 2019). These higher rates have been attributed to the strong national reproductive policies and safe motherhood programmes that prioritise male participation (Gibore et al., 2019; Kabanga et al., 2019), a strategy that could be strengthened in Zimbabwe. These findings acknowledge the need for progressive, targeted interventions to increase male participation in ANC, including programme and policy measures that promote men's engagement and support. Positive outcomes could serve as indicators of improved gender equity in support of women's health and well-being.

Table 2 reflects a significant association between male partners' awareness that pregnant women are advised to attend clinic checkups during pregnancy and their involvement in their partners' appointments (Fisher's exact test = 6.9, $p=0.02$). Furthermore, the study's findings highlight the importance of communication and awareness in promoting male partner involvement, as males who were aware of their partners' ANC scheduled dates were more likely to accompany them for ANC [Fisher's exact test = 15.8; $p < 0.01$]. Consistent with our findings, Mutuku, Kariuki and Kerochi (2025) found in Kenya that women who discussed the importance of ANC attendance had a high male partner participation than those who did not. A strong relationship was further observed between male partners' knowledge of ANC benefits and attendance with their partners [$\chi^2=14.4$, $df = 1$, $p < 0.01$].

Male partners' involvement in ANC was also found to have an association with male partners providing other related support to their partners during pregnancy [$\chi^2 = 4.35$; $df=1$; $p=0.04$]. Psycho-social, decision-making, and financial support are other forms of support that males are likely to provide their partners during pregnancy as indicated by Nyamai et al. (2022). While most men take up the responsibility to provide for, and support their wives during pregnancy, they may not see accompanying them to health facilities for ANC as part of their role. These findings suggest that health education programmes should frame ANC attendance as part of paternal responsibility and explicitly teach how partner support during pregnancy contributes to reduced maternal stress, improved birth preparedness, and better newborn outcomes.

These findings are consistent with those of earlier studies (Gibore et al., 2019; Kariuki and Seruwagi, 2016), which also revealed that living with one's partner, being aware of the dates of one's partner's ANC contact, and having been exposed to information on the importance of ANC were the main factors influencing men's participation in ANC. In order to capture men's interest, these findings highlight the need of more intensive and ongoing awareness-raising activities, including improved communication among partners on reproductive health issues and breaking cultural norms that view pregnancy as a woman's affair. This is essential for promoting knowledge about the positive impacts of ANC and the critical role men can play in achieving positive pregnancy outcomes.

The main barriers to male partner participation in ANC were identified as work commitments (63.6%), men's limited information on the importance of ANC (41.8%), and long queues at ANC facilities (39.1%). These findings align with previous research showing that men in the workforce are less likely to attend ANC due to conflicting work schedules (Aderibigbe et al., 2022; Kabanga et al., 2019). Long waiting times also deter participation, especially among employed men (Aderibigbe et al., 2022; Gibore et al., 2019). These barriers underscore the importance of promoting awareness and communication about the benefits of ANC to encourage greater male partner involvement in maternal healthcare, thereby supporting gender equity and contributing to reductions in the maternal mortality ratio. Specifically, reducing waiting times at ANC facilities could make attendance more feasible for working men.

The findings suggest strategies to improve male involvement, including utilising existing community structures to raise awareness of the importance of male partner involvement in ANC (70.6%, $n = 130$), fast-tracking services for women accompanied by partners (60.8%, $n = 112$), and sending personal invitation letters to men (33.1%, $n = 61$). This evidence aligns with Peneza and Maluka (2018), who recommended prioritising women who attend ANC with partners, acknowledging the challenge men face in balancing clinic visits with income-generating activities. These recommendations call for more inclusive, supportive approaches to ANC that recognise the critical role male partners play in promoting maternal and child health and reducing maternal mortality.

Conclusions and Recommendations

The study concludes that male partner involvement in ANC is significantly facilitated by cohabitation with the partner, men's knowledge of the benefits of ANC, and awareness of their partners' scheduled ANC appointment dates. These factors represent critical entry points that the health system can leverage to enhance male engagement. Conversely, the main barriers to participation are work commitments, men's limited information on the importance of ANC, and long waiting times at ANC clinics.

The determinants of male partner involvement in ANC identified in this study have important implications for interventions to improve women's health and advance gender equity, consistent with SDGs 3 and 5. Our findings suggest that a multi-faceted approach addressing socio-demographic and health system factors through collaboration among health systems, communities, and workplaces may increase male participation in ANC. Recommended strategies include implementing contextualised, inclusive policies that engage men without disadvantaging women who attend ANC alone or jeopardising men's employment, removing structural barriers to participation, and increasing staffing to reduce waiting times.

Table 2: Bivariate analysis of predictors of male partner involvement in ANC (n=184).

Variable	n(%)	Male involvement		χ^2	df	P
		Yes 82 (44.6)	No 102 (55.4)			
Partner aware that pregnant women are advised to attend clinic check-ups during pregnancy ? Yes No	128 (69.6) 56 (30.4)	65 (50.8) 17 (30.9)	63 (49.2) 39 (69.1)	6.9 ^a^		0.02
Partner aware of ANC contact date? Yes No	124 (67.4) 60 (32.6)	67 (54) 15 (24.1)	57 (46) 45 (75.9)	15.8 ^a^		<.001
Partner has knowledge on the importance of ANC? Yes No	111 (60.3) 73 (39.7)	62 (55.9) 20 (27.4)	49 (44.1) 53 (72.6)	14.4	1	<.001
Seen other men coming for ANC with their partners? Yes No	126 (68.5) 58 (31.5)	61 (48.4) 21 (39.6)	65 (51.6) 37 (60.4)	4.5	1	0.294
Partner asks about ANC procedures? Yes No	134 (72.8) 50 (27.2)	64 (47.8) 18 (34.7)	70 (52.2) 32 (65.3)	3.6 ^a^		0.09
Partner offers other support related to ANC? Yes No	139 (75.5) 45 (24.5)	68 (48.9) 14 (31.1)	71 (51.1) 31 (68.9)	4.35	1	0.04

^a^ Fisher's exact test used due to expected cell counts <5. Degrees of freedom (df) are not applicable for Fisher's exact test and are therefore omitted.

Future research should use qualitative interviews with male partners and dyadic studies involving both women and men to obtain primary data on barriers and facilitators to ANC involvement directly from men. Such data could inform interventions that strengthen male involvement in reproductive health services. This would advance gender equity and improve well-being for women and families in semi-urban Zimbabwe and comparable settings by

enhancing men's reproductive health knowledge and enabling informed healthcare decision-making.

Limitations

When interpreting these results, the narrow definition of male involvement used in this study must be acknowledged, as it did not capture other important

dimensions such as emotional or financial support. Generalisability is limited by the cross-sectional design. A key limitation is that only bivariate analysis was conducted; thus, potential confounding factors were not controlled for. Future studies with larger samples should use multivariate models to identify factors that remain significant after adjustment.

Despite these limitations, the study contributes to the growing evidence base and underscores the need for targeted interventions to increase male participation, ultimately improving gender equity and improving maternal and family well-being.

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