

Assessment of Cultural and Socio-economic Factors Affecting the Involvement of Husbands in Antenatal Care from Wives' Point of View

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1. ABSTRACT

Background: The importance of antenatal care (ANC) in safeguarding the safety of women and newborns cannot be overstated. One of the interventions to promote maternal health is male participation in ANC. **Aim:** This study aimed to assess cultural and socio-economic factors affecting the involvement of husbands in antenatal care from wives' point of view. **Study design:** A descriptive design was used in this study. **Setting:** The study was carried out in Antenatal Clinic at Mansoura General Hospital, Mansoura city, Dakahlia governorate, Egypt. **Sample type:** A convenient sample was utilized. **Study Sample:** The study sample included 237 pregnant women who attended antenatal clinic for followup. **Tools:** Two tools were used: Tool I: A structured interviewing questionnaire. Tool II: cultural and socio-economic factors affecting husbands' involvement in antenatal care questionnaire. **Results:** According to the findings of this study, most husband communities believe that women are responsible for ANC, and male cultural participation in ANC is lacking in our society. In addition, due to extended working hours, nearly two-thirds of men lack time. Three-quarters of husbands do not provide financial support for their families, according to wives. **Conclusion:** There are cultural and socioeconomic factors affecting husband involvement in ANC. **Recommendations:** Increase awareness of men about importance of their collaborative role in antenatal period.

Keywords: ANC, Culture, Socio-economic, Involvement of Husbands.

1. Introduction

Antenatal care (ANC) is essential for the safety of both mother and child, as well as lowering the risk of complications, impairment, and death (Tang et al., 2019). It also serves as a platform for key healthcare services such as illness prevention, screening, and diagnosis (Hu et al., 2021).

Most people around the world still base their health decisions on their culture, especially when it comes to pregnancy and labour. It is normal for women to experience a separation of gender roles during pregnancy, labour, and the postpartum period in this situation. 2019 (Yaya et al.). Because male counterparts are busy earning money and supporting their families, the importance of partners in maternal and child health is sometimes disregarded (Tokhi et al., 2018).

Male engagement is hindered by cultural ideas, according to a study on the role of husbands in maternal health and safe delivery. The roles of pregnant women and spouses change due to cultural needs (Nyang'au, et al., 2021). Men's tasks are more secondary, such as providing financial help, whilst women and female relatives

are responsible for prenatal care and childbirth (Ampim et al., 2021).

Because certain African communities are patriarchal, concerns concerning prenatal health are regarded as feminine. Men's roles during their wives' pregnancies are limited in mostly Muslim countries to decision-making and financial assistance (Mustafa et al., 2020). Men's participation in the ANC and the prevention of mother-to-child transmission are among the hurdles (PMTCT). It is culturally unacceptable for men to accompany their partners to prenatal clinics in Zambia's HIV programs (Ongolly & Bukachi 2019).

Most people said that in their culture, men are not allowed to participate in prenatal examinations with their wives, according to interviews and focus group discussions. As a result, health care providers have been forced to offer solutions such as refusing to provide prenatal treatment to pregnant women who do not have a partner (Ahmed et al., 2019).

A qualitative research of men's perspectives

on the usage of prenatal and childbirth care services found that culture is a barrier to male participation. Because pregnancy and labour are typically the responsibility of the mother-in-law and wife, men try to avoid them. Peers regard those who are involved in pregnancy and childbirth as weak (Aborigo et al., 2018).

Customers' and health-care institutions' financial restraints have been recognized as a factor influencing health-care uptake and male engagement. Male participation is hindered by the distance the male spouse goes to the clinic for education, blood tests, and consultations, as well as the cost of transportation to the clinic and the length of each visit at the clinic. Furthermore, time spent at the clinic and away from employment or other sources of income is clearly viewed as a barrier to their involvement in the ANC program (Ongeso&Okoth, 2018).

Significance of the study

Premature birth, fetal growth restriction, infant mortality, maternal stress, increased acceptance of antenatal and postnatal care, improved mothers' workload during pregnancy, childbirth preparation, husband and wife communication, early and complete antenatal care, and increased use of family planning and contraception are all benefits of male participation in antenatal care (Doegah, 2019).

According to the World Health Organization (WHO), 303,000 women died during pregnancy and delivery in 2015, with developing nations accounting for 99 percent of maternal mortality (Kariuki&Seruwagi, 2016). The Sustainable Development Goals represent global efforts to reduce the maternal mortality rate (MMR) by 70% by 2030. (SDG3). Encourage male partners to actively participate in ANC to improve their health outcomes, according to the WHO's recommendations for maternal health promotion interventions. Mother with her unborn child (Miltenburg et al., 2017 and World Health Organization, 2020).

Husbands and wives make a limited number of visits to prenatal clinics in Egypt, according to researchers' experience in prenatal clinics, and only sporadic studies have been undertaken to explain the factors that affect husbands' engagement in maternal health. Therefore, this study was carried out.

Aim of the Study

The aim of the present study was to assess cultural and socio-economic factors affecting the involvement of husbands in antenatal care from

wives' point of view.

Research question

What are cultural and socio-economic factors affecting the involvement of husbands in antenatal care from wives' point of view?

3. Methodology:

Study Design

A descriptive design is used in this investigation. It's an observational research approach that describes the characteristics of variables like socioeconomic data and cultural elements that influence the husband's engagement in antenatal care in order to reach the study's aim.

Study Setting

The research was carried out in the Mansoura General Hospital's pregnancy department in Mansoura City, Dakahlia Province, Egypt. Mansoura General Hospital is a public hospital that offers free services to women throughout the pregnancy, childbirth, postpartum, and family planning stages of their lives. The clinic is close to the surgery clinic on the first level. The antenatal clinic is divided into two sections, one for pregnant women and the other for family planning insertion, with four nurses and five obstetricians providing service. The clinic is open every day from 9 a.m. to 1 p.m., except Friday.

Sample Type

A convenient sample was used.

Study Sample

The study sample included 237 pregnant women who attended antenatal clinic for follow up.

Sample size Calculation

Calculate the sample size with 5% accuracy/absolute error and 5% type 1 error, according to literature data (Abd-Elmonem, 2016), taking into account 80% of research power: sample size = $[(Z_{1-2})^2 \cdot P(1-P)]/d^2$, where Z_{1-2} is a standard normal variable with a value of 1.96 under a type 1 error of 5% ($p=0.05$). P = Population proportion predicted based on past studies. d stands for "absolute error" or "accuracy." As a result, $[(1.96)^2 \cdot (0.81) \cdot (1-0.81)]$ is the sample size. $=236.5$ $(0.05)^2$. The sample size required for this investigation is 237, according to the formula above.

Tools of data collection

Two tools were used for data collection.

Tool I: Structured interviewing Questionnaire. Researchers developed this tool after consulting relevant domestic and international literature (Ongeso et al., 2018). It is divided into

two sections. Part 1: Female age, husband's age, female education level, husband's education level, female occupation, husband's occupation, and residence. Part 2: Pregnancy history, parity, number of miscarriages, previous pregnancy difficulties, and so on.

Tool II: Cultural and socio-economic factors affecting husbands' involvement in antenatal care from wives' point of view Questionnaire.

Researchers developed this tool after examining domestic and international literature on the subject (Firouzan, Noroozi, Farajzadegan, and Mirgha-fourvand, 2019). It is made up of two components. The first aspect is cultural, and it consists of seven components, including negative attitudes against male participation, men's fear of social stigma, communal views on women's obligations, and so on. The second issue is the socio-economic component, which includes men's lack of time as a result of long work hours, inability to provide and execute paternity leave, pregnancy care, and high delivery costs, among other things.

Validity of the Tools

A group of three specialists in the fields of women's health and midwifery care tested these tools. They offered changes, such as deleting women's opinions on men's antenatal care participation, and new arrangements, such as rephrasing some words.

Reliability of the Tool II

The Cronbach coefficient alpha guarantees reliability. The reliability of Tool II's cultural and socio-economic components is (0.85), indicating a high level of reliability.

Pilot Study

A preliminary study was conducted on 10% of the entire sample (n=38) to assess the research tool's clarity and usefulness, as well as estimate the time required to complete it. Pregnant women who took part in the pilot study were not included in the overall sample.

Ethical Consideration

The pregnant woman's written agreement was gained after receiving written authorization from the School of Nursing's Research Ethics Committee and an official letter from the Dean of Mansoura General Hospital after defining the research's objective. All participants have the option to withdraw voluntarily, as well as privacy and confidentiality. The study's findings will be made public, and everyone will benefit from it.

Procedure

- First, seek the Dean of Mansoura General Hospital's and the participants' written approval.
- From January to September 2020, data was collected for nine months.
- Researchers work in the previously mentioned settings three days a week from 9:00 a.m. to 1:00 p.m. until the calculated sample size is reached.
- To acquire pregnant women's acceptance and cooperation, researchers introduce themselves and explain the research's goal.
- For 20-30 minutes, researchers questioned each pregnant woman separately to gather information on her demographics, obstetric medical history, and cultural and socioeconomic factors that influence their husbands' participation in ANC.
- Until the sample size was determined, the researcher visited the prenatal clinic.

Data Analysis Phase

The information is sorted, coded, arranged, and classified before being transferred into a particular format. SPSS was used to examine the data (Statistical Package for Social Sciences, 24th Edition). When comparing the averages of more than two groups, analysis of variance is performed. The significance of a result is determined by the P value. When the P value is less than 0.05, the difference is statistically significant. The Pearson correlation coefficient is used to determine whether there is a positive or negative connection between the research variables.

Study Limitation

The study takes long time (nine months) because decreasing flow rate of pregnant woman to antenatal clinic due to Covid 19 pandemic.

4. Results:

Table (1) shows that less than half (44.3%) of pregnant women aged from 25 - < 30 with Mean (27.14 ± 4.33) and about two third (65.8%) of husbands were aged 30 years and more with Mean (31.47 ± 4.71). Less than half of pregnant women and their husbands had secondary education (40.5% & 38.8%) respectively. More than one third of pregnant women had semi-professional working and their husband's occupied as skilled manual worker/farmer (40.9% & 38%) respectively.

Figure 1.Shows that 75.5% of pregnant women were from rural while 24.5% from urban.

Figure 2.Shows that pregnant women had sufficient family income, sufficient and save, and insufficient were (81.80% o, 14.30%, 3.80% respectively).

Table (2) illustrates that more than two third (71.3%) of pregnant women had 2-3 gravid and half (50.2%) of then women had 2-3 delivery. Also it illustrates that one third (33.8%)of the pregnant women had previous pregnancy complications.

Table (3) demonstrates that 17.3 percent of husbands have a negative attitude toward male participation concerns, (4.6 percent) men are frightened of social stigma, and (17.7%) husbands do not want to go to the antenatal clinic with their wives. Furthermore, in our society, most husbands' communities believe in women's obligations and men's lack of cultural engagement in ANC (86.1 percent and 80.2 percent , respectively).

Traditionally, about half of women (50.6 percent) rely on their families.

Table (4) shows that less than two-thirds of spouses (61.6 percent) lack time due to excessive work hours, and more than two-thirds (66.2 percent) have significant pregnancy costs. In addition, three-quarters of spouses (75.1%) do not get government financial assistance for their families during pregnancy, and the majority of them (92%) can afford transportation costs.

Table (5) reveals that overall cultural characteristics and household income have a statistically significant connection. However, there is no statistically significant link between general cultural characteristics and women's and husbands' occupations. Total socio-economic factors and women's occupations, as well as husband's occupational family income, have a statistically significant relation

Table 1 Distribution of pregnant women and their husband according to their demographic data

Woman's age (years)		
< 20	12	5.1
20 < 25	51	21.5
25 < 30	105	44.3
≥30	69	29.1
Mean ± SD	27.14±4.33	
Husband's age(years)		
< 20	3	1.3
20 < 25	20	8.4
25 < 30	58	24.5
≥30	156	65.8
Mean ± SD	31.47 ± 4.71	
Period of marriage(years)		
< 5 years	68	28.7
5 - 10	120	50.6
≥10	49	20.7
Husband's education		
Basic education	33	13.9
Secondary education	96	40.5
Intermediate education	25	10.5
University education	61	25.7
Postgraduate education	22	9.3
Woman's education		
Basic education	31	13.1
Secondary education	92	38.8
Intermediate education	30	12.7
University education	74	31.2
Postgraduate education	10	4.2
Husband's occupation		
Unskilled manual worker	14	5.9
Skilled manual worker/farmer	90	38
Trades/business	52	21.9
Semi-professional	18	7.6
Professional	63	26.6
Woman's occupation		
Non-working	84	35.4
Unskilled manual worker	1	0.4
Trades/business	1	0.4
Semi-professional	97	40.9
Professional	54	22.8

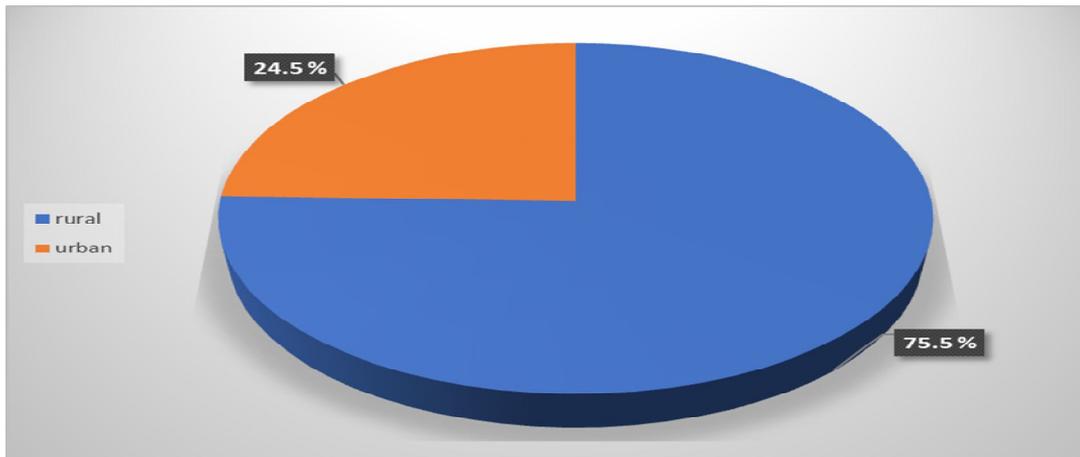


Figure 1. Distribution of pregnant women according to their residence

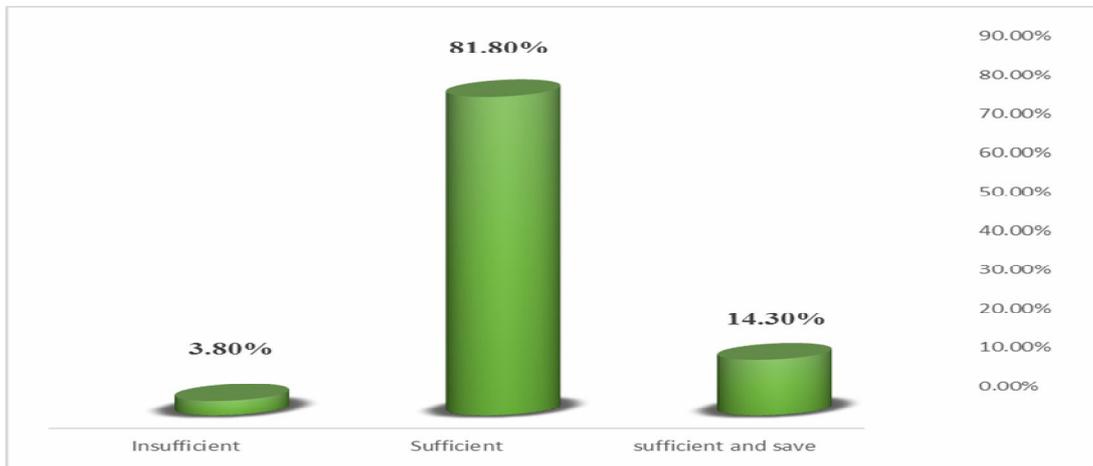


Figure 2. Distribution of pregnant women according to their family incomes

Table (2): Distribution of pregnant women according to their obstetric history

Gravidity		
Primigravida	34	14.3
2-3	169	71.3
> 3	34	14.3
M ± SD	2 ± 0.537	
Parity		
1	50	21.1
2-3	119	50.2
> 3	34	14.3
M ± SD	2.22 ± 0.940	
Previous pregnancy complications		
Yes	80	33.8
No	123	51.9
Desirability of current pregnancy		
Yes	178	75.1
No	59	24.9

Table 3. Cultural factors affecting husbands' involvement in antenatal care from wives' point of view.

Negative attitudes towards male participation issues		
Yes	41	17.3
No	196	82.7
Men's fear of social stigma		
Yes	11	4.6
No	226	95.4
The community believes of the responsibility of the woman		
Yes	204	86.1
No	33	13.9
Unwillingness to allow husband's presence in antenatal clinic		
Yes	42	17.7
No	195	82.3
Traditional women's dependence on family		
Yes	120	50.6
No	117	49.4
The insignificant contribution of families in learning to participate in boys		
Yes	116	48.9
No	121	51.1
The lack of men's cultural involvement for ANC in our society		
Yes	190	80.2
No	47	19.8

Table 4. Socio-economic factors affecting husbands' involvement in antenatal care from wives' point of view

Due to long working hours, men lack time		
Yes	146	61.6
No	91	38.4
Failure to grant and perform paternal leave		
Yes	101	42.6
No	136	57.4
High costs of pregnancy		
Yes	157	66.2
No	80	33.8
The family lacks financial support during pregnancy government		
Yes	178	75.1
No	59	24.9
Low economic level of the family		
Yes	59	24.9
No	178	75.1
Affordability of transport		
Yes	218	92
No	19	8
Transportation		
Private car	44	18.6
Public transportation	158	66.7
Walk	35	14.8

Table 5. Relationship between husband's and woman's occupation and family income & total cultural and socioeconomic factors affecting husbands' involvement in antenatal care from wives' point of view (N=237)

Husband's occupation		
Unskilled manualworker	3.07±0.73	3.36±1.598
Skilled manual	2.98±1.09	3.54±1.19
Trades/business	3.12±1.53	2.81±1.19
Semi-professional	2.56±0.98	3.5±0.86
Professional	3.25±1.796	3.29±1.48
Significance test	F= 0.997 P= 0.410	F= 2.871 P= 0.024
Woman's occupation		
Non-working	2.95±1.31	3.33±1.29
Unskilled manual worker	4±00	6±00
Trades/business	5±00	2±00
Semi-professional	3±1.09	3.09±1.11
Professional	3.26±1.91	3.59±1.52
Significance test	F= 1.049 P= 0.383	F= 2.727 P= 0.03
Family income		
Insufficient	3.89±0.782	4.56±1.424
Sufficient	3.21±1.363	3.39±1.239
Sufficient & save	1.94±1.099	2.44±1.159
Significance test	F= 15.44 P= 0.000**	F= 13.41 P= 0.000**

F (one way-ANOVA)

P (significance)

* Significant (p< 0.05)

** Highly significant (p< 0.01)

5. Discussion:

From the perspective of the wife, this study intends to investigate the cultural and socioeconomic factors that influence husbands' engagement in antenatal care. The study's findings suggest that most spouse communities believe that women are to blame for ANC, and that long working hours, expensive pregnancy costs, and the government's lack of financial support for the family during pregnancy are to blame. The findings of this study provide an answer to the research question.

More than two-thirds of pregnant women were under 30 years old, and more than one-third of husbands were under 30 years old, according to the study. This study's findings are similar to those of **Abd-EL-Monem (2016)**, who investigated how husbands participate in antenatal care at Cairo University Maternity Hospital in Egypt and the factors that influence their participation. Two-thirds were reported by the latter. More than a third of their husbands are between the ages of 20 and 29.

In terms of women's and husbands' education, more than a third of the study participants had completed secondary school. A study by **Ali, Abo-kresha (2021)** backs up the current research findings. They studied the patterns

of ANC service use and the factors that influence it among pregnant women in Sohag Province. They discovered that one-third of the participants were below grade level.

Pregnant women in the study dwell in rural areas, with three-quarters of them living in rural areas. This finding contradicts the findings of a recent Egyptian study by **Youssef et al(2020)** Nearly three-quarters of the research sample lives in rural areas, according to the findings. Despite the fact that this conclusion contradicts **Ali andAbo-(2021) kresha's** findings, they do indicate that half of the study participants live in rural areas.

In terms of the family income of the pregnant women under research, the current study indicated that the majority of the women have enough money because their husbands work long hours. This conclusion is compatible with an Egyptian study by **El-shazly et al. (2018)**, which found that most research groups had a moderate economic level, and this finding contradicts **Ali and Abo-kresha(2021)**, who found that more than two-thirds of the research sample have a high level of family income.

More than half of the pregnant women in the research had two or more pregnancies; one-third experienced problems in their last pregnancy, three-

quarters had pregnancy advised, and nearly half had two or more children. This finding is consistent with **Abd-Elmonem (2016)**, who found that more than half of the study sample had 2-4 pregnancies, and about one-third reported problems during the prior pregnancy, the majority of which were their fault.

From the perspective of women, most of the cultural elements that influence husbands' participation in antenatal care influence positive attitudes toward male participation. This finding is in line with **Mohammedet al. (2020)**, who found that the majority of participants would want men to participate in antenatal care services. In addition, **Vermeulen et al. (2016)** looked into the likelihood of male engagement during pregnancy in rural Tanzania's Magu region. The findings revealed that participants had a generally good attitude toward their partners' attendance at the clinic and were willing to urge other males to join them.

Despite the fact that the current research contradicts **Ongeso and Okoth(2018)**, beliefs they reported on "factors affecting male participation in antenatal care among clients attending antenatal clinics: the instance of Kenyatta National Hospital in Kenya". The majority of men are pessimistic about the ANC attendance rate. They consider that being a partner in the ANC is of no benefit to them.

Furthermore, the current study's findings reveal that a small percentage of husbands are concerned about societal stigma. This finding is in line with that of **Aborigo et al. (2018)**, who looked into why men are hesitant to take more active roles in pregnancy care and how they can cope with them in an emergency. Men in the Cassena-South Cana Region (KND) may risk societal scorn and humiliation if they accompany their spouses to the ANC, according to the long-term consequences of the decision-making process. This is because one of the key reasons affecting participation in prenatal care clinics is the shame of a male partner's engagement, because when a guy plays a position that is regarded to be female, there is associated social stigma.

Current research results show that due to traditional beliefs and attitudes regarding prenatal care as a female role, most husbands' communities believe in women's responsibilities and lack male cultural participation in ANC. This finding is consistent with **Nyandieka et al. (2016)**, who assessed that "male participation in maternal health planning is the key to the use of skilled childbirth services in Malindi County, Kenya." They stated that the participants' culture allows only husbands to make decisions, including pregnant women.

Where will you attend prenatal care. Even if a woman has complications and needs urgent help, the husband must make a decision, whether or not they are around.

Furthermore, **Lewis et al. (2015)** found substantial disparities in the roles of mothers and husbands in their study "Role of Husbands in the Health and Safe Delivery of Pregnant Women in Rural Nepal." Men's roles are confined to providing financial support and making decisions, while women care for pregnant women. Dominant guys are those who accompany pregnant ladies to the hospital. Men can have a unique role during pregnancy at ANC, which is a facility solely for women. Because they perceive no reason to interfere with women's affairs, moms' health issues are considered to be women's domains in their society. According to them, most men are hesitant to visit clinics because of this perception, which has an impact on their active engagement in ANC.

From the perspective of spouses, more than half of those who highlighted socio-economic issues that limit husbands' participation in antenatal care said that men lack time due to lengthy working hours. This may be due to the responsible husband's request that they work extra throughout the day, preventing them from accompanying their wife to the clinic.

Makoni et al. (2016) investigated "factors linked to male engagement in reducing mother-to-child transmission of HIV, Central Province of Zimbabwe, (2015)." Their findings are similar to those of the current study. Participants said that spending time with their partners on weekends was more convenient for them. Instead of working days, they go to the clinic since they spend the majority of their time looking for job to support their family. The inflexibility of ANC timing, according to a limited number of male partners in the study, is a factor for ANC participation inconsistency.

According to current study, three-quarters of pregnant women surveyed stated the government did not provide financial assistance to their families during pregnancy, and two-thirds said prenatal care costs are excessive. Despite the fact that the Egyptian Maternal Health Center's maternal health treatments are free, the study found that the expenses involved with seeking these services remain a substantial barrier for males to participate in ANC. They went to the clinic expecting all treatments to be free, but they were astonished by the number of drugs and laboratory tests that the clinic did not offer.

The current findings are in line with those of **Ongolly and Bukachi(2019)**, who stated that ANC services are costly and that providers try to keep costs as low as possible. According to the survey, 68.8% of males said they couldn't actively participate in their partner's ANC due to a lack of financial means.

In addition, **Yaya et al. (2019)** conducted research in rural Edo, Nigeria, to learn about men's perceptions of community and health-care system barriers to maternal access and utilization of professional treatment. The high expense of sanitation facilities, according to participants, hampered women's access to and use of facilities. One participant said that the cost of childbirth should be determined by whether or not there were any difficulties during the delivery process, and that the cost of care was a barrier to seeking maternal care.

The findings demonstrate that total cultural factors have a statistically significant link with family income, but that total cultural factors have no statistically significant relationship with female occupations or husbands' occupations. There is also a statistically significant link between total socioeconomic characteristics, female jobs, and husbands' occupational family income.

This is in line with **Rumaseuwet al(2018)** findings on the factors that influence the husband's engagement in antenatal care and birthing. They claim that the husband's ability to attend his wife during labour improves with his socioeconomic standing. A wife who works in the family can contribute financially to the family, thus she has a stronger financial position than a non-working wife.

Ongolly&Bukachi (2019), who researched the impediments to men's participation in prenatal and postnatal care in Butura, western Kenya, found similar results. They discovered that 87.8% of men are unable to participate in ANC because of the nature of their jobs, as most of them are farmers, self-employed, or very low-income temporary workers who find it difficult to leave enough time to join their jobs. During the ANC visit, partners and children were present in the clinic.

This is also supported by **Reece et al. (2010)** study on rural men's usage of prenatal and birthing care services in western Kenya. Husbands' attitudes on the occupational nature of pregnant women participating in ANC in the hospital, according to the survey, are most likely social and cultural barriers to men's engagement. Factors influencing Uganda Martyrs Hospital Ibanda's

ANC participation. Furthermore, time spent in clinics

6. Conclusion

The majority of husbands' communities believe that ANC is women's responsibility. In our society, there is a shortage of male cultural participation in ANC, and some husbands are frightened of social stigma. Furthermore, two-thirds of spouses lack time due to excessive work hours, and three-quarters lack financial support from their families. Most of them can afford transportation, according to their wives. Cultural ideas and norms continue to limit male participation even when the community accepts the gender belief system. Men who work in formal occupations are less likely to take part. The wife believes that her husband's demanding work schedule and Eastern culture are the most significant variables influencing his antenatal care participation.

7. Recommendations:

- Raise men's knowledge of the importance of their collaborative role during the prenatal time, as well as their own personal experiences with it.
- Men's specific information, health education courses, and innovative tactics to overcome negative attitudes
- Antenatal care health education and public awareness must be improved at all levels, from watershed communities to health facilities.
- Encourage medical institutions to offer services in the nights and on weekends to allow men more time to engage in ANC.
- Run an ANC behaviour change campaign to learn about the positive ideas that enable males to improve the community's perceptions of women's ANC obligations.
- Allow spouses to participate in physical examinations, create birthing education and preparation courses specifically for couples, and provide some medical and screening services for men in clinics.

Further study is recommended to

- Examine the elements that influence the husband's engagement in antenatal care from his perspective.
- Through the media, religious and social leaders, emphasize men's cultural participation in social prenatal care.

- Qualitative study is required to better understand the cultural and socioeconomic variables that encourage men to join the ANC.

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9. Conflict of interest

The authors have no conflict of interest to declare.

10. References

- Abd-ELmonem, A. S. (2016).** Factors Affecting Husband's Participation in Antenatal Care: The Women's Perspective. *World Journal of Nursing Sciences* 2 (3): 71-76.
- Aborigo, R. A., Reidpath, D. D., Oduro, A. R., & Allotey, P. (2018).** Male involvement in maternal health: perspectives of opinion leaders. *BMC pregnancy and childbirth*, 18(1), 1-10.
- Ahmed, S., Jafri, H., Rashid, Y., Yi, H., Dong, D., Zhu, J., & Ahmed, M. (2019).** Autonomous decision-making for antenatal screening in Pakistan: views held by women, men and health professionals in a low–middle income country. *European Journal of Human Genetics*, 27(6), 848-856.
- Ali, R. A., & Abo-Kresha, S. A. (2021).** Patterns and Determinants of Utilization of Antenatal Care Services by Pregnant Women in Sohag, Upper Egypt. *Journal of High Institute of Public Health*, 51(1), 33-38.
- Ampim, G. A., Blystad, A., Kpoor, A., & Haukanes, H. (2021).** “I came to escort someone”: Men’s experiences of antenatal care services in urban Ghana—a qualitative study. *Reproductive health*, 18(1), 1-12.
- Doegah PT (2019).** Investigating Male Presence at Antenatal and Choice of Place for Child Delivery in Ghana. *Front. Public Health* 7:300. doi: 10.3389/fpubh..00300
- Elshazly H., A., Elkalash S. H. & Marzouk Y., M. (2018).** Compliance of pregnant women with Antenatal Care in Family Health Facilities in Tanta District, Gharbia Governorate, Egypt. *The Egyptian Family Medicine Journal*, 2(2), 91-104.
- Firouzan, V., Noroozi, M., Farajzadegan, Z., & Mirghafourvand, M. (2019).** Barriers to men’s participation in perinatal care: a qualitative study in Iran. *BMC pregnancy and childbirth*, 19(1), 1-9.
- Hu, W., Hu, H., Zhao, W., Huang, A., Yang, Q. and Di, J., (2021).** Current status of antenatal care of pregnant women—8 provinces in China, 2018. *BMC Public Health*, 21(1).
- Kariuki, K., and Seruwagi, G., (2016).** Determinants of Male Partner Involvement in Antenatal Care in Wakiso District, Uganda. *British Journal of Medicine and Medical Research*, 18(7), 1-15. <https://doi.org/10.9734/bjmmr/2016/28056>.
- Lewis, S., Lee, A., & Simkhada, P. (2015).** The role of husbands in maternal health and safe childbirth in rural Nepal: a qualitative study. *BMC pregnancy and childbirth*, 15(1), 162. doi.org/10.1186/s12884-015-0599-8.
- Makoni, A., Chemhuru, M., Chimbetete, C., Gombe, N., Mungati, M., Bangure, D., & Tshimanga, M. (2016).** Factors associated with male involvement in preventing mother-to-child transmission of HIV, Midlands Province, Zimbabwe, 2015—a case control study. *BMC public health*, 16(1), 1-9.
- Miltenburg, A., Van Der Eem, L., Nyanza, E., Van Pelt, S., Ndaki, P., Basinda, N., & Sundby, J. (2017).** Antenatal care and opportunities for quality improvement of service provision in resource limited settings: A mixed methods study. *PLoS ONE*, 12(12).
- Mohammed, S., Yakubu, I., & Awal, I. (2020).** Sociodemographic Factors Associated with Women's Perspectives on Male Involvement in Antenatal Care, Labour, and Childbirth. *Journal of pregnancy*, 20(2).
- Mustafa, M., Batool, A., Fatima, B., Nawaz, F., Toyama, K., & Raza, A. A. (2020).** Patriarchy, maternal health and spiritual healing: Designing maternal health interventions in Pakistan. Paper presented at the Proceedings of the CHI Conference on Human Factors in Computing Systems. 5(7), 71-82.
- Nyandieka, L. N., Njeru, M. K., Ng’ang’a, Z., Echoka, E., & Kombe, Y. (2016).** Male involvement in maternal health planning key to utilization of skilled birth services in Malindi sub county, Kenya. *Advances in Public Health*, 2(1), 32-34.

- Nyang'au Rose AM, Maximilla Wanzala, and Tom Were. (2021).** 'Male Partner Involvement in Promoting Antenatal Care and Skilled Delivery Attendance in Bumula Sub-County, Kenya', *European Journal of Medical and Health Sciences*, 3: 43-51
- Ongeso, A., & Okoth, B. (2018).** Factors influencing male involvement in antenatal care among clients attending antenatal clinic: a case of Kenyatta National Hospital, Kenya. *International Journal of Advanced Research*, 6(5), 72-82.
- Ongolly, F. K., & Bukachi, S. A. (2019).** Barriers to men's involvement in antenatal and postnatal care in Butula, western Kenya. *African journal of primary health care & family medicine*, 11(1), 1-7.
- Reece, Kwambai TK, Achieng F, etal (2010).** Perspectives of men on antenatal and delivery care service utilization in rural western Kenya10(3), 1-7.
- Rumaseuw, R., Berliana, S., Nursalam, N., Efendi, F., Pradanie, R., Rachmawati, P. and Aurizki, G., 2018.** Factors Affecting Husband Participation in Antenatal Care Attendance and Delivery. *IOP Conference Series: Earth and Environmental Science*, 116, p.012012.
- Tang, X., Ding, L., Feng, Y., Wang, Y., & Zhou, C. (2019).** Antenatal care use and its determinants among migrant women during the first delivery: a nation-wide cross-sectional study in China. *BMC pregnancy and childbirth*, 19(1), 1-10.
- Tokhi M, Comrie-Thomson L, Davis J, Portela A, Chersich M, Luchters S. (2018).** Involving men to improve maternal and newborn health: A systematic review of the effectiveness of interventions. *PLoS One*; 12 (1): 1- 16.
- Vermeulen, E., Miltenburg, A. S., Barras, J., Maselle, N., van Elteren, M., & van Roosmalen, J(2016).** Opportunities for male involvement during pregnancy in Magu district, rural Tanzania. *BMC pregnancy and childbirth*, 16(1), 66. doi.org/10.1186/s12884-016-0853-8
- Yaya, S., Okonofua, F., Ntoimo, L., Udenigwe, O., & Bishwajit, G. (2019).** Men's perception of barriers to women's use and access of skilled pregnancy care in rural Nigeria: a qualitative study. *Reproductive health*, 16(1), 1-12.
- Yaya, Sanni, Friday Okonofua, Lorretta Ntoimo, Ogochukwu Udenige, and Ghose Bishwajit. 2019.** 'Gender inequity as a barrier to women's access to skilled pregnancy care in rural Nigeria: a qualitative study', *International health*, 11: 551-60
- Youssef, A. M. A., & Kurdy, N. F. H. and El-Krady, R. (2020).** Quality of Antenatal Care Services among Pregnant Women at Mansoura Governmental Hospitals. *International Journal of Nursing*, 7(2), 47-57.