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Zahroh Shaluhiah

*Health Promotion and Behavioral Sciences Department, Faculty of Public Health, Diponegoro University*

Antono Suryoputro

*Health Policy and Health Administration Department, Faculty of Public Health, Diponegoro University*

Ratih Indraswari

*Health Promotion and Behavioral Sciences Department, Faculty of Public Health, Diponegoro University*

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# Factors influencing men's involvement in maternal and child health: men's experiences and religious leader's support in Central Java, Indonesia

Zahroh Shaluhayah<sup>a,\*</sup>, Antono Suryoputro<sup>b</sup>, Ratih Indraswari<sup>a</sup>

<sup>a</sup> Health Promotion and Behavioral Sciences Department, Faculty of Public Health, Diponegoro University, Indonesia

<sup>b</sup> Health Policy and Health Administration Department, Faculty of Public Health, Diponegoro University, Indonesia

## Abstract

**Background:** The maternal mortality rate is still high in Indonesia and has not significantly decreased, including in Central Java. One indirect cause of maternal death is low husband involvement in improving mother and child health (MCH). This is due to cultural barriers and a lack of knowledge about the MCH problems. Therefore, this research aims to examine the significant factors influencing men's involvement in MCH. We recommend an appropriate intervention model to engage them in MCH, primarily for their families and communities.

**Method:** This explanatory research study was conducted using a cross-sectional design involving 400 men. They were selected using multistage proportional random sampling technique from four districts in rural Central Java. The data were collected with trained enumerators using a self-administered questionnaire tested for validity and reliability. Univariate statistics, bivariate statistics using Chi-Square tests, and multivariate analysis (logistic regression) were used to analyse the data.

**Results:** About half of the men had sufficient knowledge, positive attitudes, and high involvement in MCH, specifically during childbirth compared to pregnancy and the postpartum period. Having experienced their wives being pregnant two or more times and having support from religious leaders, health personnel, and family were the significant factors that influenced a higher level of men's involvement in MCH.

**Conclusion:** We recommend that men need MCH education that is based on their socio-cultural beliefs and facilitated by religious leaders.

**Keywords:** Maternal and child health, Men's experience, Men's involvement, Religious leader, Indonesia

## 1. Introduction

Health development in Indonesia has focused on reducing maternal mortality rate (MMR) and infant mortality rate (IMR), including child malnutrition and stunting. The Indonesian Demographic Health Survey (IDHS) in 2012 showed MMR was still 359 per 100,000 live births; It had not decreased significantly until 2016 (305 per 100,000 live births). Demak and Semarang were districts with higher incidences of maternal death [1,2] compared to other areas in Central Java in 2015, with 22 cases (106.46 per 100,000 live births) and 17

cases (128.05 per 100,000 live births), respectively. More than 60% of maternal deaths occurred during the post-natal period, 26.33% during pregnancy, and 12.76% during delivery. The direct causes of these deaths were hypertension (26.44%), bleeding (22.93%), blood system disorders including anaemia (4.64%), and infection (3.66%) [3].

In Indonesia, the mother's physical, psychological, educational, and occupational factors contribute strongly to the high rate of mortality and morbidity in pregnancy, delivery, and postpartum, as well as the low rate of exclusive breastfeeding. Good nutritional and health status is pivotal and required

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\* Corresponding author.  
E-mail address: [shaluhayah.zahroh@gmail.com](mailto:shaluhayah.zahroh@gmail.com) (Z. Shaluhayah).

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before and during pregnancy. Breastfeeding is also important and one determinant of a child's health [4]. Well-being during pregnancy is dependent on maternal conditions and nutritional intake. Psychological problems also affect maternal and infant health, specifically the continuity of exclusive breastfeeding. Therefore, support from family members, primarily husbands, has a significant contribution to improving the health of mother and child [5].

The patriarchal system still dominates in the Javanese culture, where women have a lower position than men. The men are heads of households and decision-makers in the family, including those decisions related to health problems. The role of women in families is limited primarily to domestic work such as taking care of the children, maintaining the cleanliness of the house, and preparing food [6].

In terms of family health affairs, women are often promoted to maintain and improve their health without actively involving their husbands. Empowerment programs such as health cadres have increased women's skills and enhanced their roles regarding health in the family and community. However, maternal health problems during pregnancy are primarily determined by men deciding whether or not to support what mothers should do to improve their health. For example, many women with pre-eclampsia need to be referred immediately to a hospital; but there are delays when husbands do not decide immediately that their wives need care in the hospital. Husbands' support and approval determine women's participation in family planning programs, which is essential for exclusive breastfeeding. Therefore, men's involvement in health is crucial and directly affects mother and child health [4].

It is important to note that empowering women without involving men in solving maternal and child health problems will not be effective. Efforts have been made to include men through programs such as Husbands Alert (husband SIAGA) and the birth planning and complication prevention (P4K) programs. Unfortunately, these programs have limited effectiveness and have made only minor contributions to reducing maternal and child mortality. This is because the programs only focused on men's duty to be alert to women's health; the programs did involve men comprehensively to participate and play an active role in promoting health [7].

Men's involvement in P4K is a breakthrough program from the Ministry of Health to reduce MMR by empowering the community, specifically husbands. Health workers facilitate cadres, religious or community leaders to enhance the role of

husbands, families, and communities in birth planning, prepare to prevent pregnancy or childbirth complications, and plan for using postpartum contraceptives [8]. However, several research studies showed that this program was not run optimally in many regions [9].

The Husband Alert Program (Husband SIAGA) campaign was implemented in 1999 as part of the Love Mother Movement (GSI) program in Indonesia with the value of cooperation. The first campaign aimed to make husbands aware of pregnancy dangers and obtain proper care during emergencies. Husbands need to encourage their wives to visit midwives, accompany them during childbirth, seek out the maternal care, and make transportation plans in the case of an emergency [9]. The role of a man in safeguarding MCH is to provide emotional, physical, and financial support to his wife. This includes responding to complications, seeking medical help, paying for transport, and allocating household resources [10,11].

Based on the discussions with health promotion and MCH section staff of Semarang and Demak District Health Offices, we learned male involvement in Maternity Care and P4K, including Husband Alert, has not been optimal. Cultural barriers and husbands' lack of knowledge and understanding in overcoming MCH problems made them not actively involved and committed to the program.

This research aims to examine the significant factors influencing men's involvement in MCH for developing an appropriate intervention model to engage them in the program, primarily for their families and communities.

## 2. Methods

### 2.1. Design

This was community-based and explanatory research study with a cross-sectional approach. This design was employed to assess how men are involved in MCH and to examine significant factors influencing them from August to December 2018 in four rural districts in Central Java, Indonesia.

### 2.2. Participants

Four rural districts consisting of Semarang, Kendal, Demak, and Boyolali were purposively selected with criteria of higher prevalence of maternal death and infant morbidity. Semarang and Boyolali are mountainous areas and have many large and medium-sized export-oriented manufacturing industries [2]. Meanwhile, Demak and Kendal were selected for

being coastal areas and are known as the cultural district with a relatively high number of religious people [1].

We recruited 100 husbands from each of the 4 districts. The inclusion criteria included having a baby under two months old and being non-migrant workers. The estimated necessary sample was calculated with the following assumptions: men's involvement in MCH around 50%, a 5% margin error, 95% confidence interval, and design effect 2.0. The minimum sample size was 400 respondents selected using multistage proportional random sampling [12].

2.3. Survey instrument

The survey included simple questions about the husbands' knowledge of maternal and child health, attitudes, and level of involvement in MCH during their wives' pregnancy, delivery, and postpartum periods. Furthermore, demographic information was collected, including husbands' age, educational level, occupation, wives' pregnancy experience and age, number of children, contraception use, and smoking habits. Data on family support, midwives or health staff, and religious leaders support were obtained using a self-administered pretested questionnaire with an enumerator present. The enumerator ensured a high completion rate, assured respondents by answering their queries, and edited the completed questions. The questionnaire was pretested among 50 husbands with similar characteristics in one of the unselected districts in Central Java to test the validity and reliability.

2.4. Ethical issues

The enumerator was trained before visiting the eligible respondents. Respondent gave informed consent before filling out the questionnaire. The Faculty of Public Health Semarang approved the research protocol through the Research Ethics Committee (No.093/EC/FKM/2018).

2.5. Data analysis

The data were entered into SPSS version 21, after checking the data's completeness. Non-parametric statistics such as means, medians, quartiles, and percentages were used for descriptive analysis. Furthermore, the Chi-Square test was used to analyse the association between the outcome variable with the demographic and reinforcing factors such as support from family, friends, religious

leaders, midwives or health personnel, knowledge, and attitudes. Multiple logistic regression analysis was performed to determine the best predictors of men's involvement in MCH from demographic and other independent variables. All independent variables that had a p-value greater than 0.25 for their association with the outcome variable in the bivariate analysis were included in the logistic regression model. Results from all the tests were considered statistically significant when the p-value was less than 0.05.

3. Results

Out of the 400 respondents, the average age of husbands was 32 years (SD = 7.072) and 29 years for wives. Furthermore, they were mainly Muslim (99%). A majority were entrepreneurs (58%) and government/private employees (40.5%) with educational levels ranging from high school to undergraduate (62.3%). More than 60% were experiencing their wives' second (or subsequent) pregnancy, and more than 63% had previously used contraception (Table 1).

In terms of knowledge, 49% had insufficient knowledge about pregnancy, delivery, and postpartum, such as not understanding the antenatal care (ANC) schedule, examination, and risk/danger signs (Table 2). The results also showed that only 57.2% had positive attitudes toward being involved in MCH. Many respondents stated that they do not need to be engaged during examination and delivery because those are women's affairs. About 25.5% indicated that smoking near pregnant women

Table 1. Personal characteristics of the respondents.

No	Characteristics	Frequency	%	
1	Age (years)	<32	164	41.5
		≥32	234	58.5
2	Occupation	Government and private employees	162	40.5
		Entrepreneur/trader	232	58.0
3	Education	Elementary or secondary school	151	37.8
		High school or university	249	62.3
4	Monthly income	<2,000,000 rupiahs (<\$130)	141	35.2
		≥2,000,000 rupiahs (≥\$130)	259	64.8
5	Wives' age (years)	<29	195	48.8
		≥29	205	51.2
6	Previous pregnancies experienced (times)	<2	133	33.3
		≥2	267	66.7
7	Previous contraceptive use	Yes	255	63.7
		No	145	36.3

Table 2. Knowledge, attitudes, and Men's involvements in maternal child health (MCH).

No	Respondent's knowledge, attitudes, and involvement in MCH		Frequency	%
1	Knowledge of MCH in terms of wives' pregnancy, delivery, and postpartum	Sufficient	203	50.8
		Insufficient/lack of	187	49.2
2	Attitudes toward involvement during wives' pregnancy, delivery, and postpartum	Positive	229	57.2
		Negative	171	42.8
3	Men's involvement during wives' pregnancy, delivery, and postpartum	High	210	52.5
		Low	190	47.5

was permissible. Also, most respondents thought that a pregnancy educational class was only intended for women. Nearly half (47.5%) had low involvement in the MCH of their families.

Table 3 shows the majority of husbands' involvement was more at delivery (63%) rather than during pregnancy (52.75%) and postpartum (53.25%). For example, their involvement included preparing funds, transportation, and accompanying their wives to health services. They were also available during childbirth, although they did not enter the delivery room. Culturally, husbands were characterized as family resource providers, including providing resources for maternal health care. Usually, expectant fathers wait outside the clinics and are often accompanied by other relatives. They are only called after wives have delivered, and the baby has been washed and wrapped with a clean cloth [6].

Regarding the family's attitudes, over 50% felt they were supported to be involved in MCH during their wives' pregnancy, delivery, and postpartum by family members such as mother-in-law and sister-in-law (Table 4). More than 50% felt their friends supported them. Nearly 50% felt religious leaders supported their involvement in MCH.

We found that 47.5% of respondents had low involvement, while 50% have low knowledge of pregnancy, delivery, and postpartum. There was a significant association between knowledge and involvement (p-value = 0.001). However, only 57% had positive attitudes toward wives' pregnancy, delivery, and postpartum. Their attitudes are significantly associated over 50% felt they were supported with the involvement of MCH. There was an association between the age of respondents and level of involvement in MCH (p = -value = 0.023)

Table 3. Distribution of high and low levels of husbands' involvement in MCH during their wives' pregnancy, delivery, and postpartum time periods.

Husbands' involvement in MCH	High		Low		P-value
	N	%	N	%	
Pregnancy	211	52.75	189	47.25	0.034
Delivery	252	63	148	37	
Postpartum	213	53.25	187	46.75	

Low involvement was primarily seen in those aged below 32 years old compared to those above. Husbands who are working outside of town had lower involvement than those working within town. Family income was also significantly associated with involvement; lower-income respondents were more likely to be involved less than those with higher income. Another important finding in the bivariate analysis showed that the number of previous pregnancies (p < 0.001), age of wives (p = 0.023), levels of support from family (p = 0.001), friends (p = 0.009), religious leaders (p = 0.001), and midwives (p = 0.001) were all significantly associated with husbands' involvement in MCH; all p-values were less than 0.05.

In the bivariate analysis, we examined the association between each independent variable and the outcome variable (low vs. high level of male involvement in MCH). Each independent variable with a p-value < 0.25 was included in the multivariate logistic regression model; hence, only educational level, occupation, and work location were excluded from the logistic regression model.

Table 5 shows the results of the multivariate logistic regression model. Based on these results, the number of previous pregnancies experienced, as well as support from family, midwives, and religious leaders influenced the respondents' involvement in MCH with p-values of 0.001, 0.021, 0.004, and 0.001, respectively. Furthermore, husbands who had experienced 2 or more previous pregnancies were 2.7 times more likely to be involved in MCH than inexperienced ones (< 2 previous pregnancies).

Table 4. Respondents' perceptions about levels of supports for men's involvement in MCH from respondents' family, religious leaders, midwives, and friends.

No	Reinforcing factors		Frequency	Percentage
1	Family's Supports	High/sufficient	222	55.5
		Low/lack of	178	44.5
2	Religious Leaders' Supports	High	198	49.5
		Low	202	50.5
3	Midwives, Supports	High	242	60.5
		Low	158	39.5
4	Friends' Support	High	225	56.25
		Low	175	43.75



Table 5. Multivariate logistic regression results for association between demographic and reinforcing factors with level of respondents' involvement in maternal child health (MCH) in their family.

Variables	$\beta$ Coefficient	Standard Error	Odds Ratio	95% Confidence Interval		P-value
				Lower	Upper	
Intercept	-2.013	0.297	0.134	0.134		0.000
Previous pregnancies experienced	1.026	0.241	2.790	1.739	4.975	0.000
Family's Support	0.549	0.238	1.731	1.086	2.759	0.021
Midwife's support	0.680	0.238	1.975	1.239	3.146	0.004
Religious leader's support	0.939	0.245	2.556	1.582	4.132	0.000
Attitudes	0.461	0.236	1.586	0.998	2.520	0.051

Note.

-Dependent Variable: Men's involvement in safeguarding MCH during pregnancy, delivery and post-natal periods (high vs. low) r.

-Independent Variables: Respondent's age, occupation, income, previous pregnancies experienced, duration of marriage, wife's age, use of previous contraception (yes/no), family's support, friends' support, midwife's support, religious leader's support, knowledge, and attitudes.

-Statistical significance level:  $p < 0.05$ .

Those who felt supported by religious leaders were 2.5 times more likely to be involved than those without such support. Men who felt supported by health personnel, specifically midwives, were 1.9 times more likely to be involved than those who felt not supported. Those who had support from their families were 1.7 times more likely to be involved than those who did not feel supported.

## 4. Discussion

### 4.1. The experiences of husbands' involvement in MCH and wives' pregnancy

The effect of husbands' involvement on the health of pregnant women, newborn babies, and postpartum women has been recognized. Culturally, a newly-married couple usually plans to have children sooner than later; thus, most Indonesian men are happy when they find out their wives are pregnant, especially for the first child. In all social strata in the Indonesian culture, husbands are expected to support their wives during this period so that they have an easy delivery and a healthy baby. They practise certain traditional norms, such as the most well-known tradition that it is the men's obligation to fulfil their wives' craving for food [7,11]. Many men still follow traditional practices and respect specific taboos followed by the community during their wives' pregnancies such as not killing any kind of animals. However, these are not related to medical rules; instead, these practices are strongly associated with psychological aspects that husbands care profoundly for the well-being of their wives and the unborn child [13].

In addition, men's participation in MCH is crucial, because they are the primary decision-makers with significant influence in the family. Other research showed that increasing male involvement provides

many benefits in services, specifically regarding access to antenatal (ANC) visits, childbirth, and postpartum check-ups including use of birth control [14,15]. This research showed that husbands with fewer experiences with previous pregnancies were more likely to have low involvement. Thus, previous pregnancy experiences appear to increase their knowledge and attitudes, as well as affect their behaviour. This is in accordance with Rumaseuw et al. that husbands' participation in ANC visits was significantly influenced by the number of previous pregnancies experienced [16].

### 4.2. Knowledge and attitudes of husband about MCH

Lack of husbands' knowledge is a dangerous sign during pregnancy, delivery, and postpartum. The schedule of ANC visits, eating patterns, and stress during pregnancy, delivery, and postpartum could become a barrier to their involvement. Health education about the actual activities that husbands should conduct during their wives' pregnancy, birth, and postpartum was rarely delivered. Only a few have been exposed to health education messages primarily related to women's and child's health [17].

A previous study showed that husbands' low knowledge about pregnancy, childbirth, postpartum, and family planning was 72.2%, 33%, 65.2%, and 90.4%, respectively [18]. Overall, 72.2% have low maternal health knowledge [15]. Furthermore, the majority do not know the minimum ANC visits, how the birth process occurs, the psychological disorders associated with pregnancy and postpartum, and practices for healthy eating patterns. Most claimed not to seek information about the dangers of pregnancy and childbirth. Furthermore, 55.7% did not know their wives' schedule for pregnancy control [19]. Research in Africa showed that

conducting campaigns and health education has improved men's knowledge and changed their beliefs and attitudes in supporting ANC visits [20].

The negative attitudes were probably caused by low knowledge and limited information about their role in improving mother and child health [21]. Many men thought that ANC, childbirth, and newborn care were largely the responsibilities of the wives, mother-in-law, or sisters as part of women's affairs. This gender role norm significantly affected the degree of men's involvement and was adhered to primarily during first pregnancy and delivery. The mother-in-law intervenes and takes responsibility for the direct care to comply with specific traditional prescriptions, prohibitions, and practices. Meanwhile, men's role was primarily secondary and supportive tasks such as providing finances and preparing food. Social and cultural factors often hinder supporting MCH because men felt that those activities were only intended for mothers [22].

Research conducted by USAID in Indonesia showed that 65.1% of respondents were exposed to the Alert Husband campaign in their respective districts. More than half (53.0%) confirmed that they knew about the Alert Husband program. In the family planning program, the majority only escort their wives to visit health services. Additionally, 71.3% did not participate in choosing the family planning (FP) method. In most cases, women are given more choices because they are directly involved in contraception use [18].

#### 4.3. Health staff attitudes and roles of religious leaders

Some health staffs, including midwives and obstetricians, play an important role in improving husbands' involvement in MCH. Many health personnel often passively discourage men from being involved in pregnancy examinations, such as not inviting them into the room to discuss their wives' ANC results. However, when there is a severe problem, husbands are summoned for a direct explanation. Health staff/midwives stated that there are no written guidelines nor proper orientation for the staff and the community on how to facilitate male involvement in MCH [22].

Religious leaders are essential as role models for men in the community to increase their involvement. Male religious leaders' opinions delivered through recitation are complied with by their followers. Their sermons about the spiritual and moral needs to support and respect each other play a prominent role in increasing MCH participation

[23]. Unfortunately, the leaders rarely mention the roles of men in supporting maternal and child health [24].

#### 4.4. Family support and attitudes to husbands' involvement

The family, particularly mother-in-law and sisters-in-law, did not support the respondents' involvement in MCH. Men's roles are mainly secondary, such as preparing food and providing financial resources. Socio-cultural beliefs determine gender roles in wives' pregnancy, delivery, and postpartum, with the mother-in-law taking the responsibility to provide care. Yet, the primary decision-makers are husbands, specifically concerning how limited family resources are utilized. Meanwhile, the mother-in-law upholds prominent role in arranging and handling MCH outcomes [25], which could directly affect health [26].

## 5. Conclusion

Nearly half of husbands have low involvement in MCH, but their involvement was higher in the delivery process than during pregnancy and postpartum. Lack of knowledge and experiences, negative attitudes, low support from female relatives (i.e. mother-in-law), midwives, and religious leaders could be the major factors of low men's involvement. The socio-contextual factors are essential in patriarchal societies such as Indonesia; women may depend on their husbands' decision-making when seeking health care, which could be a potential determinant of their health. There is a need to change the perspectives of men, female relatives, including mothers-in-law, midwives, and religious leaders concerning MCH.

#### Conflicts of interest

The authors declare no conflict of interest, financial or otherwise.

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