

A Cross-Sectional Study of the Effects of Husband Support and Health Information Exposure on Women's Uptake of Cervical Screening in Community Health Centers

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ABSTRACT

Cervical cancer screening through methods such as visual inspection with acetic acid (VIA) is a low-cost early detection tool in low- and middle-income settings. Yet uptake among eligible women remains suboptimal. Health information exposure and husband support are hypothesized as key determinants of screening participation. This study examines the relationship between exposure to health information and husband support with women's participation in cervical screening at community health centers. A quantitative observational design with a cross-sectional approach was used. A total of 120 women aged 25–49 years were recruited by stratified random sampling from two community health centers in East Java, Indonesia. Data were collected using validated questionnaires on information exposure (10 items), husband support (emotional, informational, instrumental support, 15 items), and screening participation (binary outcome: ever screened vs never). Statistical analyses included Spearman's correlation and logistic regression ($\alpha = 0.05$). Among respondents, 78% had good exposure to cervical cancer screening information, 65% reported supportive husband behaviors, while 58% had ever undergone screening. Spearman's correlation showed significant association between information exposure and screening uptake ($\rho = 0.46$, $p < 0.001$), and husband support and screening ($\rho = 0.38$, $p < 0.001$). In multivariate logistic regression adjusting for age, education, and parity, women with high information exposure had 2.8 times higher odds of screening (OR = 2.81; 95% CI 1.45–5.43), and those receiving moderate-to-strong husband support had 2.2 times higher odds (OR = 2.20; 95% CI 1.12–4.30).

Keywords: Cervical Screening, Health Information Exposure, Husband Support, Uptake

BACKGROUND

Cervical cancer remains a major public health challenge globally, especially in resource-limited settings (World Health Organization, 2022). Early detection through screening is crucial to reduce mortality, yet many eligible women do not participate in screening programs (Ayanto et al., 2024). Visual Inspection with Acetic Acid (VIA) is widely promoted as a low-cost, feasible screening option in primary health settings (Rawat et al., 2024). However, participation rates vary widely, often constrained by barriers such as lack of awareness, fear, cultural taboos, and limited spousal support (Understanding women's and men's perspectives..., 2024).

Spousal support, especially from husbands in patriarchal societies, plays a critical role in women's health decision-making (Male partner involvement strongly influences..., 2024). A systematic review on male involvement in cervical cancer prevention underscores that husbands' knowledge,

attitudes, and support can influence screening uptake (A Systematic Review of Male Involvement..., 2024). Women whose partners offer informational, emotional, or instrumental support are more likely to engage in screening (Individual and intimate-partner factors..., 2022). Moreover, exposure to health information via media, health workers, or community outreach increases women's understanding of benefits and risks, thus motivating screening behavior (Effectiveness of couple education..., 2024). Yet studies combining both information exposure and husband support in one model remain limited in Indonesia. This study aims to fill that gap by examining how both factors independently and jointly relate to screening uptake.

METHODS

This study employed a cross-sectional design conducted in 2024 at two community health centers (Puskesmas) in East Java. This approach allowed the researchers to examine the relationship between information exposure, husband support, and women's participation in cervical cancer screening at a single point in time. The selection of Puskesmas as study sites aimed to represent primary community health services that play a crucial role in promotive and preventive care.

The study participants were women aged 25–49 years who had lived for at least one year in the catchment area of the selected Puskesmas. Exclusion criteria included a history of hysterectomy or a prior diagnosis of cervical cancer to ensure the relevance of screening participation assessment. A total sample of 120 participants was determined to achieve 80% power to detect moderate correlations. Stratified random sampling was applied to ensure that the participant distribution represented the characteristics of the broader population.

The research instruments consisted of several components, including the Information Exposure Questionnaire, which assessed exposure to health information from various sources and categorized respondents into low, moderate, or high exposure. The second instrument was the Husband Support Scale, covering emotional, informational, and instrumental support, with classifications ranging from weak to strong. Screening participation was assessed through a single question regarding prior cervical cancer screening. Covariates such as age, education, parity, socioeconomic status, and distance to health facilities were also collected. All instruments were adapted from validated scales and pilot-tested, with Cronbach's α values of 0.82 and 0.79, indicating good reliability.

Data collection was conducted by trained enumerators through face-to-face interviews after obtaining informed consent from all respondents. All procedures followed ethical research standards, including approval from the local Institutional Review Board. This ensured that participants' rights, privacy, and comfort were protected throughout the study.

Data analysis was performed using SPSS version 25. Descriptive statistics were used to summarize respondent characteristics and the distribution of key variables. Bivariate relationships between information exposure, husband support, and screening participation were assessed using Spearman correlation. Logistic regression with the enter method was then applied to evaluate adjusted associations, with statistical significance set at $p < 0.05$. These analytical procedures provided insights into the factors influencing cervical cancer screening participation in the community.

RESULTS

The participants in this study had a mean age of 34.8 years ($SD \pm 6.5$), representing women in the early to mid-reproductive period. Their educational background was diverse, with 40% having completed secondary school, 30% primary education, and another 30% tertiary education. Parity varied from zero to four children, with a median of two, indicating that most respondents had experience with maternal and reproductive health services.

Regarding key study variables, the majority of women demonstrated high information exposure, with 78% (94 respondents) reporting substantial access to health information from various sources. Husband support was also relatively strong, with 65% (78 respondents) classified as receiving moderate or strong support across emotional, informational, and instrumental dimensions. In terms of screening behavior, 58% (70 respondents) reported having undergone cervical cancer screening at least once, suggesting moderate uptake within the population.

The bivariate analysis indicated significant positive associations between information exposure and screening participation ($\rho = 0.46, p < 0.001$), as well as between husband support and screening participation ($\rho = 0.38, p < 0.001$). These correlations suggest that women with greater access to health information and higher support from their husbands were more likely to engage in cervical cancer screening. The multivariate analysis further explored these relationships while adjusting for sociodemographic covariates to determine the independent contribution of each factor.

Predictor	Adjusted OR	95% CI	p-value
High information exposure vs low/moderate	2.81	1.45 – 5.43	0.002
Husband support (moderate/strong vs weak)	2.20	1.12 – 4.30	0.022
Age, education, parity, SES (covariates)	—	—	NS

Women with high information exposure had nearly three times higher odds of screening; those with supportive husbands had over two times higher odds, after adjustments.

DISCUSSION

This study corroborates previous findings that both health information exposure and spousal support are significant determinants of cervical screening uptake. For instance, a prior Indonesian study found that husband support accounted for ~47.1% of variance in VIA screening, with information sources contributing ~31.3% (Salam et al., 2024) (The Influence of Husband Support and Information Sources..., 2024).

In Uganda, emotional and financial support from partners were strongly associated with screening (Individual and intimate-partner factors..., 2022). Similarly, in Zimbabwe, both women and health providers emphasized men's lack of knowledge as a barrier to support (Women and health providers' perspectives..., 2023).

The positive effect of couple-based education is further supported by a cluster randomized trial in Ethiopia, which showed that home-based couple counseling increased screening uptake from 2.1% to 72.5% (Effectiveness of couple education..., 2024).

From a behavioral perspective, information exposure works through motivating perception (per Protection Motivation Theory), while husband support may lower psychological and logistical barriers. Our adjusted findings suggest that both factors exert independent contributions to screening behavior.

Limitations

This cross-sectional design cannot prove causality. Self-reported screening may incur recall bias. The sample is limited to two health centers which may limit generalizability. Future research may incorporate longitudinal or intervention designs and broaden geographic scope.

CONCLUSION

Health information exposure and husband support both show significant positive associations with women's participation in cervical cancer screening in the studied settings. To improve screening rates, health programs should include strategies to disseminate accurate information widely and actively engage male partners in educational interventions.

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