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Modeling cervical cancer prevention behavior community: a SEM approach

Permodelan Perilaku Pencegahan Kanker Serviks pada Masyarakat Kota Depok: Pendekatan SEM

Kursih Sulastriningsih[1], Vina Dwi Wahyunita[1], Dedeh Rodiyah[2]
[1]Universitas Bhakti Pertiwi, Jakarta Selatan, Indonesia
[2]Poltekkes Kemenkes Jakarta I, Jakarta Selatan, Indonesia
*Email: kurshisulastri7@gmail.com

ABSTRACT

Background: *Cervical cancer is one of the leading causes of death among women and remains a major public health issue, particularly in developing countries such as Indonesia.*
Objective: *This study aimed to analyze the direct and indirect influences, as well as the magnitude of these influences, of the role of midwives, the role of health cadres, family support, and the motivation of women of childbearing age on cervical cancer prevention behavior in the Depok City community.*
Methods: *This research employed a quantitative approach with a cross-sectional design. A total sample of 100 women of childbearing age was selected using a purposive sampling technique. Data were analyzed using Structural Equation Modeling (SEM) with SmartPLS 3.3 and SPSS 24.*
Results: *The findings revealed that cervical cancer prevention behavior was significantly influenced by the role of midwives (29.12%), the role of cadres (18.28%), family support (14.45%), and women's motivation (27.19%). The direct effect on prevention behavior was 89.0%, while the indirect effect was 1.55%, resulting in a total overall effect of 91%.*
Conclusion: *The role of midwives emerged as the most dominant factor influencing prevention behavior. Increased activeness and competency of midwives in providing education and services contributed to higher participation of women in cervical cancer prevention efforts. These findings are expected to serve as a basis for strengthening promotive and preventive interventions through the empowerment of health workers, families, and communities in supporting healthier behavioral practices.*

Keywords: *cadres, cervical cancer, midwives, motivation, prevention*

ABSTRAK

Latar Belakang: Kanker serviks merupakan salah satu penyebab kematian terbanyak pada wanita dan masih menjadi masalah kesehatan yang serius, terutama di negara berkembang seperti Indonesia.
Tujuan: Penelitian ini bertujuan untuk menganalisis pengaruh langsung dan tidak langsung, serta besarannya, dari peran bidan, peran kader, dukungan keluarga, dan motivasi wanita usia subur terhadap perilaku pencegahan kanker serviks pada masyarakat Kota Depok.
Metode: Penelitian ini menggunakan pendekatan kuantitatif dengan desain cross-sectional. Sampel sebanyak 100 wanita usia subur diperoleh melalui teknik purposive sampling. Analisis data dilakukan menggunakan Structural Equation Modeling (SEM) berbasis SmartPLS 3.3 dan SPSS 24.
Hasil: Hasil penelitian menunjukkan bahwa perilaku pencegahan kanker serviks dipengaruhi secara signifikan oleh peran bidan (29,12%), peran kader (18,28%), dukungan keluarga (14,45%), dan motivasi wanita usia subur (27,19%). Pengaruh langsung variabel-variabel tersebut terhadap perilaku pencegahan mencapai 89,0%,

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sedangkan pengaruh tidak langsung sebesar 1,55%, sehingga total pengaruh keseluruhan adalah 91%.
Kesimpulan: Peran bidan merupakan faktor yang paling dominan dalam membentuk perilaku pencegahan. Semakin aktif dan kompeten peran bidan dalam memberikan edukasi dan layanan, semakin tinggi partisipasi wanita usia subur dalam upaya pencegahan kanker serviks. Temuan ini diharapkan dapat menjadi dasar bagi penguatan intervensi promotif dan preventif melalui pemberdayaan tenaga kesehatan, keluarga, serta komunitas dalam mendukung terbentuknya perilaku hidup sehat.

Kata kunci: bidan, kader, Kanker serviks,motivasi, pencegahan

INTRODUCTION

Cervical cancer remains a major global health problem and is one of the leading causes of mortality among women, particularly in developing countries such as Indonesia [1]. Data from WHO indicate more than 570,000 new cases and 311,000 deaths worldwide, showing that cervical cancer continues to pose a significant medical and economic burden [2].In Indonesia, Globocan 2020 recorded over 36,633 new cases, with a high proportion occurring in women of childbearing ageespecially in urban areas such as Depok, where early detection efforts remain suboptimal [3].

Low participation in early detection is influenced by various underlying factors, including limited knowledge, cultural stigma, socioeconomic constraints, and restricted access to HPV vaccination, which remains costly and not universally accessible [4]. In Depok City, IVA examination coverage is reported to be only 10–15% of the targeted population, reflecting limited awareness and preventive practices [5]. These gaps are influenced by individual factors such as risk perception and motivation, as well as external factors including family support and social norms within the community [6].

The low engagement in screening has significant consequences, as delayed detection increases morbidity, mortality, and healthcare burden [7]. Preventive behavior is shaped through interactions among internal motivation, family support, and the roles of health workers such as midwives and community health cadres who serve as the primary providers of education, support, and guidance related to reproductive health [8]. These actors influence knowledge, attitudes, and intentions, which are central components in various health behavior models that explain determinants of preventive actions [8].

Based on these challenges, a comprehensive analysis is needed to understand how social and individual factors influence cervical cancer prevention behavior in Depok City. Therefore, this study aims to examine the direct and indirect influence of the role of midwives, the role of cadres, family support, and the motivation of women of childbearing age on cervical cancer prevention behavior. Using the Structural Equation Modeling (SEM) approach, this study provides evidence-based insights and novelty by mapping the magnitude of each predictor’s contribution, serving as a strategic foundation for strengthening promotive and preventive programs in the community [9].

METHODS

Study Design

This study employed a quantitative analytical survey approach with a cross-sectional design. The aim was to examine the influence of midwives’ roles, health cadres’ roles, family support, and motivation of women of reproductive age on cervical cancer prevention behavior [10]. The study was conducted from January to March 2025 in several health centers in Depok City.

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Data Source and Sampling Procedure

The population in this study consisted of women of reproductive age who lived in Depok City and met the inclusion criteria, namely having received counseling or health services related to cervical cancer prevention. Sampling was carried out using purposive sampling with a total sample of 100 respondents. The sample size was determined based on the Partial Least Squares (PLS) analysis guidelines, which recommend a minimum of 10 times the number of arrows directed at the dependent latent variable [11], in this case, the cervical cancer prevention behavior variable. Since this study employed a non-probability sampling technique, namely purposive sampling, there is a potential risk of selection bias that may threaten internal validity. Although inclusion and exclusion criteria were applied to minimize bias, the absence of randomization limits the representativeness of the sample. Therefore, the findings of this study should be interpreted cautiously and are only generalizable to women of reproductive age in Depok City who meet the specified criteria, and cannot be generalized to broader populations.

Variables of the Study

The independent variables were the role of midwives, the role of health cadres, family support, and the motivation of women of reproductive age. The dependent variable was cervical cancer prevention behavior.

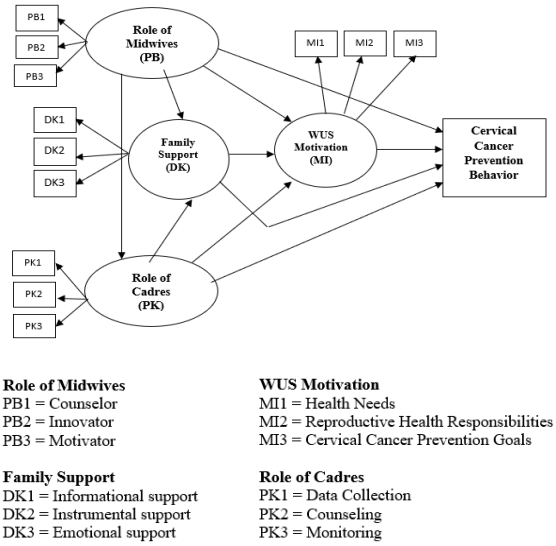

Figure 1. Research Concept Framework

Figure 1 illustrates the study's conceptual framework, with each construct defined by specific indicators. The role of midwives includes health education, counseling on cervical cancer prevention, facilitation of screening, and motivational support. Health cadres contribute through community outreach, information dissemination, encouraging screening participation, and follow-up support. Family support is reflected in emotional, informational, instrumental, and appraisal aspects. Women's motivation is assessed through internal drive, risk awareness, perceived benefits, and intention to take preventive actions. Cervical cancer prevention behavior is indicated by participation in screening, maintaining reproductive hygiene, seeking health information, and adopting preventive practices.

Data Collection

Primary data were collected using standardized questionnaires with semantic differential scales. Data collection followed systematic stages, including instrument preparation, data collection, data cleaning, and coding.

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Measurement and Instruments

The questionnaire measured each construct based on specific indicators. The role of midwives included education, counseling, facilitation, and motivation. The role of health cadres included outreach, information dissemination, and assistance. Family support was measured through emotional, informational, instrumental, and appraisal support. Motivation was assessed through awareness, perceived benefits, and intention. Cervical cancer prevention behavior included participation in screening, maintaining hygiene, seeking information, and practicing preventive. Validity and reliability tests were conducted using outer loading, Average Variance Extracted (AVE), Composite Reliability, and Cronbach's Alpha, with a threshold of ≥ 0.70.

Ethical Considerations

This study received ethical approval from the Health Research Ethics Committee of STIKES Kendal, Indonesia (Ethical Clearance No. 073/EC/KEPK-STIKES-KENDAL/XII/2024). All respondents provided written informed consent prior to participation.

Data Analysis

Data analysis was conducted using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS). The analysis included univariate analysis to describe respondent characteristics, bivariate analysis to identify initial associations, and multivariate analysis to examine direct and indirect relationships among variables. This method allows the assessment of complex relationships between latent constructs.

RESULTS

The respondents' characteristics in this study—age, education level, and employment—reflect the profile of women of reproductive age in Depok City regarding cervical cancer prevention behavior. These factors are important as they influence how individuals receive information, make decisions, and engage in preventive actions [12]. Furthermore, these data provide a basis for developing targeted and more effective intervention strategies. The distribution of respondent characteristics is presented in Table 1:

Table 1. Characteristics of Respondents (Women of Reproductive Age) in Depok City

Characteristic		n	%
Age	20–29 years	23	23
	30–35 years	64	64
	>35 years	12	12
Education	Senior High School	91	91
	Academy/Diploma	9	9
Occupation	Housewife	74	74
	Private Employee	26	26
Total		100	100

Source: Processed from SPSS Ver 24.0

The respondents (n=100) were mostly women of reproductive age in the productive age group, with senior high school education, and predominantly housewives. This profile reflects their socioeconomic background, which may influence access to information, decision-making, and participation in cervical cancer prevention. These characteristics suggest that respondents are actively in the reproductive phase and play key roles in the household, potentially affecting their involvement in health education and preventive behaviors [13]. Further analysis showed that all model indicators had loading factor values >0.5 and probability >0.05, indicating good validity and reliability [14]. This confirms that the model is appropriate for explaining

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relationships between variables and can be used as a basis for cervical cancer prevention interventions.

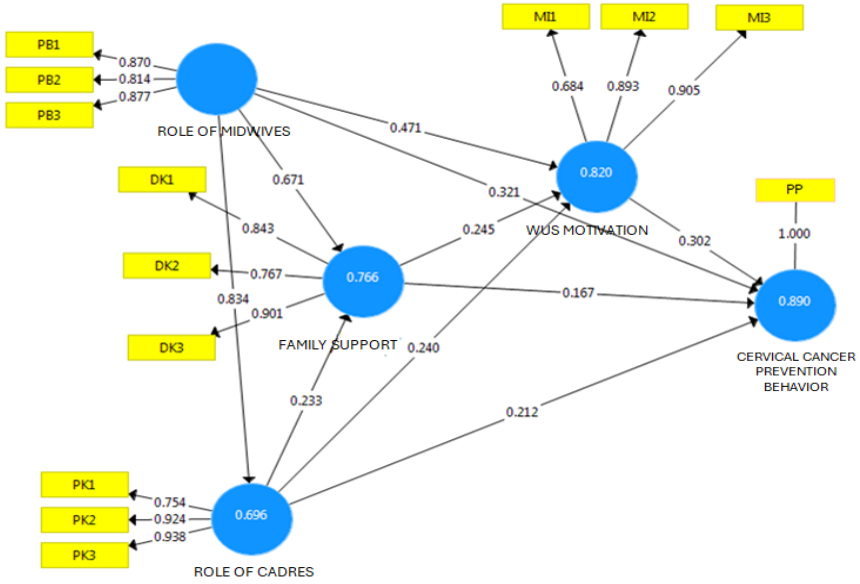

Figure 2. PLS output - Loading factor

Figure 2 shows the PLS loading factors, where all indicators have values >0.50, indicating good validity and reliability. PB1–PB3 (role of midwives) and DK1–DK3 (family support) have the highest loadings, with PB3 (motivator) being the most dominant, highlighting the crucial role of midwives in motivating cervical cancer prevention behavior. These findings suggest that strengthening midwives' motivational roles and family support should be prioritized in interventions and policies. The structural model confirms that the role of midwives is the strongest predictor, followed by motivation, cadres, and family support. Although indirect effects are smaller, integrated efforts involving health workers, families, and individual motivation remain essential.

Figure 3 indicates that all variables are statistically significant, with t-statistics >1.96 and p-values <0.05, meaning all hypotheses are accepted, and all paths are significant at α = 5%.

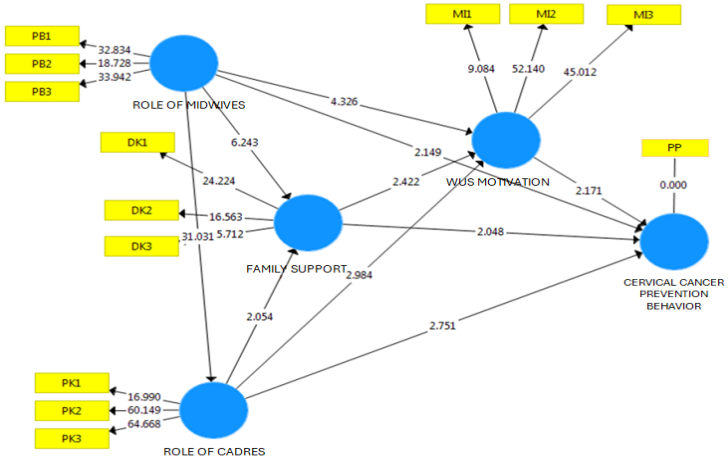

Figure 3. PLS Output - T-Statistic

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Detailed hypothesis testing is presented in the following table 2.

Table 2. Results of T-Statistic Measurement of the Relationship between Variables in the Structural Model

Relationship Between Variables	T Statistics	p-value	Ha	Path Coefficient (β)
Family Support → WUS Motivation	2.422	0.017	Accepted	0.1667
Family Support → Cervical Cancer Prevention Behavior	2.048	0.043	Accepted	0.1667
WUS Motivation → Cervical Cancer Prevention Behavior	2.171	0.032	Accepted	0.3019
Role of Midwives → Family Support	6.243	0.000	Accepted	0.3206
Role of Midwives → WUS Motivation	4.326	0.000	Accepted	0.3019
Role of Midwives → Role of Cadres	31.031	0.000	Accepted	0.9084
Role of Midwives → Cervical Cancer Prevention Behavior	2.149	0.034	Accepted	0.3206
Role of Cadres → Family Support	2.054	0.043	Accepted	0.2122
Role of Cadres → WUS Motivation	2.984	0.004	Accepted	0.2122
Role of Cadres → Cervical Cancer Prevention Behavior	2.751	0.007	Accepted	0.2122

The path coefficient results show that all relationships are positive and significant, indicating that each variable contributes to cervical cancer prevention behavior in Depok City. The Role of Midwives is the strongest determinant, both directly and by strengthening cadres, family support, and women's motivation, highlighting its central role in behavior change. Cadres and family support also contribute by enhancing motivation and encouraging preventive actions through community facilitation and emotional support [15]. Additionally, WUS motivation acts as a mediator and has a significant direct effect on prevention behavior (T=2.171; p=0.032). Strong motivation, such as awareness of reproductive health risks, encourages participation in prevention programs [16].

Table 3. Percentage of Influence Between Variables on Cervical Cancer Prevention Behavior Variables in the Depok City Community

Source Variable	Direct Effect (β)	Indirect Effect (β)	Total Effect (β)	Direct (%)	Indirect (%)	Total (%)
Role of Midwives	0.3206	0.0136*	0.3342	29.12%	1.238%	30.36%
Role of Cadres	0.2122	0.0036*	0.2158	18.28%	0.307%	18.58%
Family Support	0.1667	0.0002*	0.1669	14.45%	0.002%	14.45%
WUS Motivation	0.3019	–	0.3019	27.19%	0.000%	27.19%
Total (R^2)				89.0%	1.55%	90.6%

Based on Table 3, the Role of Midwives is the most dominant factor influencing cervical cancer prevention behavior in Depok City, both directly and by strengthening family support and women's motivation. This highlights the central role of midwives in shaping awareness, attitudes, and preventive actions [17]. Motivation is also a key internal factor driving preventive behavior, while the Role of Cadres and Family Support contribute as external supports, although with smaller effects. Overall, the model shows that the combination of professional roles, social support, and internal motivation

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effectively influences prevention behavior. Remaining unexplained factors may include access to services, cultural norms, and psychosocial conditions not examined in this study.

DISCUSSION

The Influence of Role of Midwives on Cervical Cancer Prevention Behavior

The SEM results show that the Role of Midwives has a significant contribution to improving cervical cancer prevention behavior among women of reproductive age in Depok City. Midwives act not only as service providers but also as key agents in shaping awareness, motivation, and family involvement through education and counseling. This influence is supported by their strategic position as the primary and most trusted reproductive health providers at the community level, which enhances message credibility and encourages early detection. This finding is consistent with Notoatmodjo, who states that health workers play a central role in shaping preventive behavior through effective communication and education. Thus, midwives are essential in influencing both individual decisions and the surrounding support system in cervical cancer prevention. [18].

Research shows that midwives play a crucial role in increasing participation in cervical cancer screening. A study by Sari, Lestari, and Mulawardhana (2022) found that knowledge, attitudes, and professional experience of midwives were significantly associated with their performance in conducting early detection of cervical cancer using the Visual Inspection with Acetic Acid (VIA) method ($p < 0.05$) [19]. Other studies also support this finding. Research by Winata et al. (2023) reported that midwives with better knowledge, attitudes, and skills were more likely to perform VIA screening effectively, highlighting the importance of strengthening midwives' competence in early detection programs [20]. Similarly, Mwaliko et all.(2021) reported that improved competence in VIA screening among midwives significantly increased the implementation of early detection practices [21]. Furthermore, studies indicate that counseling and health education provided by midwives can improve women's awareness and willingness to undergo cervical cancer screening [22]. Overall, these findings reinforce the strategic role of midwives and the importance of strengthening their competence and active engagement in cervical cancer prevention.

The indirect effect of the Role of Midwives through the Role of Cadres was recorded at 0.03%. Cadres have a strategic role as an extension of health workers in providing information and encouraging IVA screening at the community level. Research by Yanuarini et al. (20205) reported that the involvement of community health cadres significantly increased women's participation in cervical cancer early detection programs, particularly through community education and outreach activities [23].

Meanwhile, women's motivation also had an indirect effect. Motivation plays an important role in shaping awareness and intention to undergo screening. A study by Zhang et al. (2021) found that women's knowledge, perceived risk, and motivation were significantly associated with cervical cancer screening behavior [24]. These findings indicate that strengthening both community support and individual motivation is essential to improve participation in cervical cancer prevention programs.

Thus, the Role of Midwives is a key factor influencing cervical cancer prevention behavior in Depok City. Strengthening midwives' capacity in education—supported by cadres, family support, and women's motivation—is an effective strategy to reduce cervical cancer incidence. This approach should be implemented comprehensively through sustainable, community-based programs, along with cross-sector collaboration to ensure health messages are widely adopted in daily life.

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The Influence of the Role of Cadres on Cervical Cancer Prevention Behavior

The SEM analysis shows that the Role of Cadres has a significant direct effect on cervical cancer prevention behavior (18.28%) and a small indirect effect through family support and WUS motivation (0.307%), with T = 2.751 and p = 0.007 (α = 0.05). This indicates that cadres play an important role in increasing awareness and participation in early detection. From a community empowerment perspective, cadres are effective because they operate within social networks, helping reduce barriers such as fear, stigma, and embarrassment. In collectivist settings, peer support strongly influences health decisions. In practice, cadres focus on counseling, assisting during community activities, and mobilizing participation in screening programs (e.g., IVA). They do not perform clinical procedures but act as facilitators who strengthen outreach and community engagement, in line with the Ministry of Health [25].

These results are supported by Anggraeni's [26] research, which states that cadres who are provided with training and education are able to increase the coverage of early detection of cervical cancer through a community-based approach, especially through direct counseling on IVA tests. In addition, Sulistyorini and Damayanti [27] also emphasized that cadres have an important role in encouraging the participation of women of childbearing age to undergo cervical cancer screening, especially by providing information and psychosocial support in their surroundings.

Research by Timiyatun et al. (2025) reinforces the importance of cadres' social and emotional roles in cervical cancer prevention. Their study shows that supportive attitudes and emotional engagement from cadres and local leaders significantly increase women's participation in screening, highlighting that community-based encouragement is often more effective than knowledge alone in motivating preventive behavior [28].

Research by O'Donovan et al. (2019) reviewed the role of Community Health Workers (CHWs) or health cadres in cervical cancer screening in low- and middle-income countries (LMICs). Of the 15 studies reviewed, CHWs played a role in community education (n=14), assisting or conducting screening (n=5), and post-screening follow-up (n=1). This study found that a community-based approach involving CHWs was effective in increasing awareness and acceptance of cervical cancer screening, especially in areas with limited health professional [28].

These findings highlight the importance of strengthening midwives' competencies in communication, counseling, and technical screening skills through continuous training and structured community-based programs. Enhancing this role can create a multiplier effect by influencing cadres, families, and women's motivation. Cadre strengthening should go beyond knowledge, focusing on communication skills, motivational approaches, and structured supervision. Integrating cadres into referral and follow-up systems can further improve screening coverage and program sustainability. Additionally, these results reflect socio-cultural dynamics, where family support—especially from husbands—plays a key role in decision-making. Emotional and financial support can reduce anxiety and increase women's willingness to participate in screening.

The Influence of Family Support on Cervical Cancer Prevention Behavior

The findings of this study indicate that Family Support plays a meaningful role in strengthening cervical cancer prevention behavior among women of reproductive age. Support from partners and close family members, whether emotional, informational, or practical, helps women feel more confident and willing to undergo screening. This interpretation aligns with Friedman [29], who states that family encouragement contributes to stronger health motivation and preventive actions.

This finding reflects the socio-cultural dynamics of health decision-making, where reproductive health behaviors are often negotiated within the household. In many

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families, particularly in patriarchal contexts, husband approval plays a crucial enabling role. Emotional reassurance and financial support from family members may reduce anxiety and increase women's readiness to undergo screening.

Several studies reinforce the importance of family support in encouraging cervical cancer screening. Anwar (2018) found that partner support significantly increased women's participation in cervical cancer screening in Indonesia, highlighting the role of spouses in influencing preventive health behaviors [30].

A study by Supatmi et al. in Indonesia examined the relationship between Family Support and knowledge with the intention of women of childbearing age to undergo visual inspection with acetic acid (VIA). The results showed a significant relationship between Family Support ($p = 0.000$; $r = 0.482$) and knowledge with the intention to undergo VIA examination ($p = 0.003$; $r = 0.376$). These findings indicate that Family Support is very important in encouraging women to undergo early detection of cervical cancer [31].

A study by Alem et al. (2020) evaluated factors influencing cervical cancer screening behavior among women of childbearing age in Ethiopia. The study found that husband and family support had a positive effect on cervical cancer screening behavior (AOR = 1.38 for husband support and AOR = 5.03 for social support). These results suggest that cervical cancer prevention strategies should involve all family members to increase awareness and participation in screening [32].

A study by Mosidat et al. (2025)in Nigeria showed that emotional and financial support from partners is very important for women in undergoing cervical cancer screening. The study found that women who received support from their husbands were more likely to have a Pap smear than those who did not receive such support. This finding highlights the need to involve partners in health education programs to increase participation in screening [33].

These results are also supported by previous studies showing that family support, particularly from husbands, plays an important role in cervical cancer screening behavior. A study by Juwitasari, Harini, and Rosyad (2021) found that husband support significantly influenced women's participation in cervical cancer screening, both directly and indirectly through increased self-efficacy [34]. Women who received encouragement and emotional support from their husbands were more likely to undergo screening compared with those who did not receive such support. These findings suggest that cervical cancer prevention programs should incorporate family-centered educational strategies. Involving husbands and family members in counseling sessions may reduce misconceptions and strengthen collective responsibility for women's reproductive health. Overall, these findings emphasize that the family—especially husbands—acts as an influential decision-making support system. Strengthening family involvement is therefore essential in cervical cancer prevention programs, as it enhances women's awareness, confidence, and adherence to early detection practices.

The Influence of WUS Motivation on Cervical Cancer Prevention Behavior

The study findings show that women's motivation plays an essential role in shaping cervical cancer prevention behavior. Motivation reflects the internal drive of women to take preventive actions and influences their decision to participate in screening programs. Previous studies have shown that motivational factors significantly predict cervical cancer screening behavior, as women with higher perceived risk, response efficacy, and self-efficacy are more likely to participate in screening programs such as Pap smear or VIA [35]. Furthermore, research based on the Information–Motivation–Behavioral Skills model indicates that motivation is directly associated with cervical cancer screening participation and can significantly influence women's preventive health behavior [36].

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The strong direct influence of WUS Motivation suggests that internal psychological readiness plays a decisive role in transforming knowledge into preventive action. Even when external support from midwives, cadres, and family exists, screening behavior may not occur without perceived susceptibility and personal relevance.

Previous research also supports this conclusion. A study by Thamminen et al. (2019) found a significant relationship between women's motivation and their participation in cervical cancer screening programs, indicating that women with higher motivation were more likely to undergo Pap smear or VIA examinations compared with those with lower motivation. High motivation encourages women to actively participate in the early detection of cervical cancer. Conversely, women with low motivation tend to postpone or even avoid preventive examinations due to fear, lack of awareness, or perceived barriers [37].

Likewise, a study conducted by Atalay et al. (2020) reported that attitudes and motivation among women of reproductive age are important predisposing factors influencing participation in cervical cancer early detection programs. Women who have positive attitudes toward cervical cancer prevention and screening are more likely to undergo examinations such as a Pap smear or VIA. Conversely, low motivation and negative attitudes may reduce women's willingness to participate in screening programs, which can also be influenced by demographic factors such as age, education, and access to health information[38].

Research by Aminu and Henok [39] also showed that knowledge, attitude, husband's support, and health worker support factors contributed to WUS Motivation to undergo Pap Smear examination in cervical cancer patients. Support from the surrounding environment, including family and health workers, can increase individual WUS Motivation to take preventive measures. Research by Aulia and Hartati [40] examined the effect of WUS Motivation on Cervical Cancer Prevention Behavior among women of childbearing age in Indonesia. WUS Motivation from community leaders proved to be more effective in increasing Cervical Cancer Prevention Behavior compared to only using leaflets. Research by Sumarmi et al. [41]in Indonesia evaluated the relationship between WUS Motivation and Pap smear actions in women of childbearing age. A study by Huan Yang et al. [42] examined the effect of WUS Motivation on cervical cancer prevention efforts among health students. The results showed that WUS Motivation plays an important role in encouraging student participation in health programs. Research by Mingyu et al. [43] examined the relationship between WUS Motivation and adolescent attitudes towards the HPV vaccine as an effort to prevent cervical cancer. This finding suggests that increasing WUS Motivation can contribute to increasing adolescents' positive attitudes towards the vaccine as a step to prevent cervical cancer.

Therefore, interventions should not only focus on information dissemination but also on strengthening risk perception, self-efficacy, and personal health responsibility. Motivational counseling and tailored risk communication strategies may significantly enhance screening participation. Overall, these findings demonstrate that WUS Motivation is a key determinant of cervical cancer prevention behavior. Strengthening motivation through education, supportive environments, and active involvement of families and health workers can enhance women's readiness and participation in early detection efforts.

CONCLUSION

Cervical cancer prevention behavior in Depok City is influenced by a combination of professional, social, and individual factors. The Role of Midwives is the strongest determinant, supported by cadres and family in creating a supportive environment, while women's motivation strengthens readiness for early detection. These findings indicate

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that prevention efforts should use integrated approaches involving health workers, families, and community support. Health centers are encouraged to utilize these results to strengthen promotive and preventive programs through collaboration with the government and communities, particularly in increasing WUS motivation and awareness of early detection.

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