

THE RELATIONSHIP BETWEEN HEALTH WORKERS' SUPPORT AND THE ATTITUDE OF WOMEN REPRODUCTIVE AGE TOWARD VISUAL INSPECTION WITH ACETIC ACID (VIA) EXAMINATION AT UPTD PUSKESMAS II DENPASAR TIMUR

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ABSTRACT

Background: Cervical cancer remains a leading cause of cancer-related mortality among women worldwide. Early detection through Visual Inspection with Acetic Acid (VIA) is a low-cost, simple, and effective method to prevent the progression of cervical cancer. However, the coverage of VIA screening in Indonesia, specifically in Denpasar remains low, which may be influenced by several factors, one of which is health workers' support. This study aims to assess the relationship between health workers' support and the attitude of women reproductive age (WRA) toward VIA examination at UPTD Puskesmas II Denpasar Timur.

Methods: A cross-sectional study with consecutive sampling was conducted among 51 WRA respondents. Data were collected using a questionnaire, and the variables studied were health workers' support and WRA attitudes and analyzed through univariate, bivariate (Chi-Square), and multivariate (Logistic Regression) analysis.

Results: The results indicated that most respondents received good support from health workers (62.7%). However, most respondents showed a negative attitude toward VIA examination (60.8%). The Chi-Square test revealed a significant relationship between health workers' support and the attitude of WRA toward VIA examination ($p = 0.041$; OR = 3.750). Multivariate analysis confirmed that health worker support is a significant predictor ($p = 0.029$; OR = 4.493).

Conclusion: In conclusion, there is a significant relationship between health workers' support and the attitude of WRA toward VIA examination, indicating that health workers' support plays an important role in shaping positive attitudes toward VIA examination.

Keywords: Health workers support, attitude of women reproductive age, VIA examination

INTRODUCTION

Cervical cancer is a malignant tumor growing in the cervix primarily caused by persistent infection of *Human Papillomavirus* (HPV) and remains a major global health concern. It is currently the fourth most common cancer worldwide, with an estimated 660,000 new cases and approximately 350,000 deaths recorded in 2022¹. In Indonesia, the burden of this disease ranks as the second most common cancer among females, accounting for approximately 17.2% of all female cancer cases and claiming 20–

25 lives daily². The disease typically requires a long progression period, taking approximately 5 to 10 years to develop from the initial HPV infection to the invasive stage³. This long latent period provides a critical "window of opportunity" for early detection. Screening for precancerous lesions can significantly reduce mortality, potentially improving the 5-year survival rate to 92% if the disease is detected and treated at an early stage⁴. However, local data from RSUP Prof. Dr. I.G.N.G Ngoerah Denpasar indicates that the majority of patients still present at advanced

stage (Stage II B and above), highlighting the urgency of effective screening method.

Visual Inspection with Acetic Acid (VIA) examination is recommended as a primary screening method, particularly in low-resource settings. It is a simple, low-cost, and effective method with a sensitivity of up to 96%⁵, making it highly effective for mass screening. Despite its advantages, the national coverage of VIA screening in Indonesia remains low⁶. Specifically, in Bali, VIA coverage reached only 3.9% in 2021, falling far short of the national target of 80%⁷. The situation is particularly concerning in Denpasar, where data from 2021 shows a coverage rate of only 2.5% of the target population. Among the health facilities in the region, UPTD Puskesmas II Denpasar Timur recorded one of the lowest coverage rates at just 0.9%^{8,9}.

The consistently low screening coverage is influenced by a complex set of factors, including women's level of knowledge, socioeconomic status, access to healthcare facilities, and importantly, social support¹⁰. Support from health workers is a critical component of this social support system. Health workers serve not only as medical providers but also as educators and motivators¹¹. They play a crucial role in providing comprehensive support, which encompasses informational support (educating about risks and procedures), emotional support (reducing anxiety and fear), instrumental support (facilitating access and scheduling), and appraisal support (providing positive feedback and encouragement)¹²⁻¹⁴. This comprehensive support is expected to play a key role in shaping a positive attitude toward the VIA procedure among women of reproductive age (WRA).

Attitude is a multidimensional construct consisting of cognitive (beliefs/knowledge), affective (feelings/emotions), and conative (intention to act). Many women may have good knowledge (cognitive) but are held back by fear or embarrassment (affective). Positive attitude is essential to overcome psychological barriers such as fear of the procedure, embarrassment, or lack of confidence, thereby increasing participation in screening programs¹⁵.

Based on the persistently low VIA coverage in Denpasar and the important role of health workers in influencing health behavior, this study aims to analyze the relationship between health workers' support and the attitude of women of reproductive age toward VIA examination at UPTD Puskesmas II Denpasar Timur.

MATERIALS AND METHODS

This study employed an observational method with a cross-sectional design. The research was conducted at UPTD Puskesmas II Denpasar Timur in 2025. Data collection was carried out from May to October 2025. The target population was all women of reproductive age (WRA) in the working area of the Puskesmas in Denpasar Timur. The study population was all WRA visiting UPTD Puskesmas II Denpasar Timur during study period. The sample size was calculated using an analytic categorical formula, resulting in a minimum of 23 respondents. To account for potential incomplete data, an additional 10% was added, yielding a final sample size of 51 respondents. This study used a consecutive sampling technique, in which all women of reproductive age who visited UPTD Puskesmas II Denpasar Timur during the study period were recruited based on the inclusion criteria and exclusion criteria. Inclusion criteria included women aged 30–50 years. Exclusion criteria included inability to read or write, presence of severe mental or physical illness, and incomplete questionnaire responses.

The independent variable was health workers' support including 20 items covering informational, emotional, instrumental, and appraisal support. The dependent variable was WRA Attitude including 15 items covering cognitive, affective, and conative components. Both items were measured using a Likert-scale. Data were collected using a questionnaire adapted from previous studies^{16,17}. Data were processed using Microsoft Excel and SPSS. Data analysis included univariate analysis for frequency distribution. Bivariate analysis was used to analyzed the distribution of respondents' characteristics and WRA attitude and Chi-Square test to examine the relationship between health workers' support and WRA attitude. Multivariate analysis was performed using Multiple Logistic Regression. This study has received ethical clearance (No: 0723/UN14.2.2.VII.14/LT/2025).

RESULTS

A total of 51 respondents of women reproductive age were included in this study. Most of respondents were in late adulthood (36–45 years) (37.3%) worked as housewives (45.1%), and had higher education (University level) (39.2%). Most respondents (78.4%) had never undergone a VIA examination. The detailed characteristic of respondents are presented in Table 1.

Table 1. Characteristics of respondents

Characteristics	Frequency	
	n	%
Age (years)		
Early adulthood (30-35)	18	35.3
Late adulthood (36-45)	19	37.3
Early elderly (46-50)	14	27.5
Occupation		
Housewife	23	45.1
Private employee	16	31.4
Civil servant	6	11.8
Trader	4	7.8
Others	2	3.9
Education		
No formal education	1	2
SD	3	5.9
SMP	11	21.6
SMA	16	16
Higher education (bachelor)	20	39.2
Total	51	100

Table 2 presents the distribution of health workers' support and WRA Attitude toward VIA Examination. Majority of

respondents perceived good support from health workers (62.7%). However, the majority of respondents still exhibited a negative attitude toward the VIA examination. (60.8%)

Table 2. Distribution of health workers' support and WRA attitude

Variables	Frequency	
	n	%
Health workers' support		
Good support	32	62.7
Less support	19	37.3
WRA attitude		
Positive	20	39.2
Negative	31	60.8
Total	51	100

The analysis of WRA attitude based on demographic characteristics is summarized in Table 3. The findings shows that the WRA in the late adulthood (36-45 years) showed the highest positive attitude (47.4%). WRA who were employed (46.4%),

with higher education ($\geq$ SMA-S1) (43.2%) and had prior IVA examination were more likely to show a positive attitude compared to their counterparts.

Table 3. Distribution of WRA attitude by demographic characteristics

Characteristics	WRA attitude		Total (n)
	Negative	Positive	
Age (years)			
Early adulthood (30-35)	12 (66.7%)	6 (33.3%)	18
Late adulthood (36-45)	10 (52.6%)	9 (47.4%)	19
Early elderly (46-50)	9 (64.3%)	5 (35.7%)	14
Occupation			
Employed	15 (53.6%)	13 (46.4%)	28
Housewife	16 (69.6%)	7 (30.4%)	23
Education			
Low ($\leq$ SMP)	10 (71.4%)	4 (28.6%)	14
Higher ($\geq$ SMA-S1)	16 (56.8%)	16 (43.2%)	37
Undergone VIA Examination			
No	25 (62.5%)	15 (37.5%)	40
Yes	6 (54.5%)	5 (45.5%)	11

Table 4 presents the descriptive statistics of health workers' support scores of four components: informational, instrumental, emotional, and appraisal support. Emotional support had the highest mean score among the health workers' support

components (mean = 15.08), while appraisal support showed the lowest mean score (mean = 14.45). The overall health workers' support score had a mean of 59

Table 4. Descriptive statistics of health workers' support score

Components	Number of items	Theoretical range	Mean	SD
Informational	5	5-20	14.76	3.004
Instrumental	5	5-20	14.73	3.099
Emotional	5	5-20	15.08	3.117
Appraisal	5	5-20	14.45	2.935
Total	20	20-80	59.02	12.15

Table 5 presents the descriptive statistics of respondent attitude scores, which were measured of three components: cognitive, affective, and conative. The cognitive component

demonstrated the highest mean score (mean = 16.18), the conative component had the lowest mean score (mean = 15.55). The total attitude score had a mean of 47.44.

Table 5. Descriptive statistics of WRA's attitude score

Components	Number of items	Theoretical range	Mean	SD
Cognitive	5	5-20	16.18	2.455
Affective	5	5-20	15.71	2.077
Conative	5	5-20	15.55	2.579
Total	15	15-60	47.44	7.108

The relationship between health workers' support and WRA attitude was analyzed using the Chi-Square test shown in Table 6. The Chi-Square test revealed a significant relationship between health workers' support and attitudes toward VIA examination (p

= 0.04; OR = 3.750; 95% CI = 1.091 – 13.795). WRA who received good support were more likely to demonstrate positive attitudes compared to WRA with less support.

Table 6. Bivariate analysis of health workers' support and WRA attitude

Health workers' support	WRA attitude		Total (n)
	Negative	Positive	
Less support	15 (78.9%)	4 (21.1%)	19
Good support	16 (50%)	16 (50%)	18
Total	31 (60.8%)	20 (39.2%)	51
P value	0.041		
OR	3.750		
95% CI	1.091 – 13.795		

Table 7 shows multivariate analysis using Multiple Logistic Regression was performed to adjust for potential confounding factors such as age, occupation, education, and prior VIA experience. The results confirmed that Health Worker Support

remained the only significant predictor of a positive attitude ($p = 0.029$), with an adjusted Odds Ratio of 4.493 (95% CI = 1.179–20.723). Other variables did not show a statistically significant influence

Table 7. Multivariate analysis

Variables	<i>p-value</i>	Exp(B)	95% CI
Health workers' support	0.029	4.493	1.179 – 20.723
Age	0.547		
Occupation	0.145	3.098	0.678 – 14.155
Education	0.835	0.842	0.167– 4.249
Undergone VIA Examination	0.776	0.776	0.187 – 3.498

DISCUSSION

This study aimed to determine the relationship between health workers' support and the attitudes of Women of Reproductive Age (WRA) toward Visual Inspection with Acetic Acid (VIA) examination. The main finding of this study indicates a statistically significant relationship between health worker support and WRA attitudes ($p = 0.041$). Furthermore, multivariate analysis confirmed that health workers' support is the dominant predictor, where women who perceive good support are approximately 4.5 times more likely to demonstrate a positive attitude compared to those receiving poor support (OR = 4.493). This aligns with previous studies by Nabila et. al and Citra & Ismawati which emphasized that support from health professionals is a crucial external factor in motivating women to participate in early cancer detection programs^{4,11}.

While the majority of respondents (62.7%) received good supports from health workers, the majority of respondents (60.8%) still exhibited a negative attitude toward VIA examination. To understand this contradiction, it is necessary to analyze the specific components of the variables.

Regarding health worker support, the emotional support and informational support components received the highest mean scores. This suggests that health workers at UPTD Puskesmas II Denpasar Timur have successfully provided empathy, reduced

anxiety, and delivered clear information regarding the dangers of cervical cancer. This finding is consistent with Umami (2019), who stated that emotional support, such as empathy, is crucial in reducing patient anxiety¹³. However, the appraisal support component received the lowest score (mean = 14.45), particularly on the item regarding receiving rewards or appreciation for participation. According to Wigati et al., health workers should function as key reinforcing factors in health-related behaviors, with appraisal support recognized as a particularly important component of this reinforcement¹⁸. Hayu & Darma further stated that negative attitudes and lack of participation are significantly associated with minimal support¹⁹. The lack of positive reinforcement (praise or appreciation) found in this study may explain why the good support provided did not fully translate into positive attitudes for all respondents¹⁸.

Regarding WRA attitudes, a gap was found between the cognitive and conative components. The cognitive component (knowledge/belief) had the highest score, indicating that women understand the benefits of VIA. Conversely, the "Conative" component (intention to act) had the lowest score. This indicates that high knowledge does not automatically result in a willingness to act. This study found that psychological barriers, such as fear of the procedure and embarrassment (Affective component), significantly hinder the formation of a positive intention. This supports findings by Latifah et al. and Dewi who noted that

despite knowing the benefits, women often maintain negative attitudes due to fear of pain and vulnerability^{20,21}.

The multivariate analysis revealed that demographic factors such as age, occupation, education, and prior VIA experience did not significantly influence attitude in this population ($p>0.05$). This highlights that external support from health providers is more critical than sociodemographic background in shaping attitudes toward cervical cancer screening in this specific setting. The strong influence of health worker support (OR = 4.493) suggests that interventions focusing on interpersonal communication are highly effective.

This study has several limitations. The cross-sectional design limits causal inference between health workers' support and WRA attitude. Relatively small sample size may reduce the generalizability of the findings. Potential information bias, particularly social desirability bias, may have occurred, as respondents could have provided socially desirable responses regarding health workers' support. In addition, other factors, such as husband/family support, cultural beliefs, and economic status, were not examined. Future studies should employ longitudinal designs with larger, probability-based samples and incorporate qualitative methods to further explore factors influencing WRA attitudes toward VIA examination.

CONCLUSION AND SUGGESTION

This study confirms a significant relationship between health worker support and the attitude of women reproductive age (WRA) toward VIA examination, establishing health workers' support as the dominant predictor of a positive attitude. Although the majority of respondents perceived overall good support from health workers, a significant proportion still exhibited a negative attitude, specifically lacking the intention (conative attitude) to undergo screening. This finding shows that though informational and emotional support are strong, the lack of appraisal support (positive reinforcement) hinders women from overcoming deep-seated fear and shame, that contributes to negative attitude.

It is recommended that health workers and UPTD Puskesmas II Denpasar Timur focus on enhancing appraisal support by actively providing praise and positive feedback to boost WRA's self-efficacy. Women of Reproductive Age (WRA) are also encouraged to be proactive in seeking information and overcoming fear regarding the procedure.

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