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Association of Sociocultural Factors and Health Literacy Levels with Cervical Cancer Early Detection Among Women in Reproductive-Age Couples in the Service Area of the Laosu Community Health Center in 2025

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ABSTRACT:
Background: Cervical cancer remains a major cause of death among women, particularly in settings where early detection coverage is low.
Objective: This study analyzed the association of sociocultural factors and health literacy with cervical cancer early detection among women in reproductive-age couples in the Laosu Community Health Center service area in 2025.
Methods: This quantitative cross-sectional study involved 278 respondents selected using simple random sampling. Data were collected using a structured questionnaire and analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4 software.
Results: Sociocultural factors had a significant positive effect on health literacy (β = 0.323; t = 4.539; p = 0.000) and early detection of cervical cancer (β = 0.112; t = 4.962; p = 0.000). Health literacy did not significantly affect early detection (β = -0.007; t = 0.351; p = 0.726) and did not mediate the relationship between sociocultural factors and early detection (β = -0.002; t = 0.325; p = 0.745). The R-square values were 0.104 for health literacy and 0.159 for early detection, indicating limited explanatory power. Only 21 respondents (7.55%) had undergone early detection, while 257 respondents (92.45%) had not.
Conclusion: Early detection of cervical cancer remained very low. Sociocultural factors, particularly stigma and shame within the final measurement model, were more directly associated with screening behavior than health literacy. These findings indicate a knowledge-behavior gap and suggest that culturally sensitive interventions should accompany health literacy improvement to increase cervical cancer screening uptake.

KEYWORDS: Cervical cancer; early detection; sociocultural factors; health literacy; women in reproductive-age couples.

INTRODUCTION

Cancer is one of the leading causes of death worldwide and is considered a catastrophic noncommunicable disease because, in addition to being life-threatening, it requires significant treatment costs and a lengthy care process. Indonesia is also experiencing the impact of a high disease burden and a continuously rising financial burden [1]. The issue of cancer has become a major concern in public health worldwide, including in Indonesia [2]. Data from research and reports by the Ministry of Health indicate that not only is the number of cancer cases increasing, but so are the severity and the resulting social and economic impacts on communities [3].

As one of the leading causes of death from noncommunicable diseases, cancer continues to be a growing global burden. In 2022, it was recorded that 9.7 million people (18.7%) worldwide died from cancer. Of these, the four leading causes of cancer-related deaths were breast cancer, cervical cancer, lung cancer, and colorectal cancer [4,1].

According to data from the World Health Organization (WHO) in 2024, cervical cancer currently ranks fourth in incidence, with approximately 660,000 new cases and around 350,000 deaths in 2022 attributed to this disease. The majority of these deaths occur in low- and middle-income countries. The highest incidence and mortality rates for cervical cancer are found in sub-Saharan Africa, Central America, and Southeast Asia [5]. Indonesia ranks third highest in the world for cervical cancer cases. The number of new cervical cancer cases in Indonesia in 2022 was approximately 36,964, and approximately 20,708 of these women died from the disease. This means that nearly 3 out of 5 women diagnosed with cervical cancer lose their lives.

Regional differences in the burden of cervical cancer are associated with inequities in access to vaccination, screening, and treatment services; risk factors, including the prevalence of human immunodeficiency virus (HIV) infection; and social and economic

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determinants such as sex, gender bias, and poverty. Women living with HIV are six times more likely to develop cervical cancer compared to the general population, and it is estimated that 5% of all cervical cancer cases are caused by HIV [6]. Cervical cancer disproportionately affects younger women, and as a result, 20% of children who lose their mothers to cancer do so due to cervical cancer [3].

Various efforts to prevent and detect cancer early, as well as to improve access to treatment, have been made but remain uneven, leading to disparities in cancer patient survival rates across the globe, particularly in developing countries. Globally, cancer cases are projected to rise from 20 million new cases in 2022 to 35 million by 2050, necessitating various strategic measures to improve health intervention outcomes—both through healthcare facilities and changes in individual behavior [1]. Generally, there are two approaches to cervical cancer prevention: primary prevention, specifically through the HPV vaccine, and secondary prevention, which involves routine visual inspection with acetic acid (VIA) or Pap smear examinations, as well as HPV DNA testing [7,6].

The 2020 Indonesia Health Profile [8] states that the results of cervical cancer screening among women aged 30–50 in Indonesia from 2018 to 2020 revealed a total of 50,171 cases, of which 5,847 were suspected cases of cervical cancer. The provinces with the highest early detection coverage were West Sulawesi, followed by the Bangka Belitung Islands at 37.6%, and South Sumatra at 32.1%. Meanwhile, the provinces with the lowest early detection coverage were Papua at 0.6%, North Maluku at 1.2%, and Southeast Sulawesi at 1.7%.

According to data from the Southeast Sulawesi Provincial Health Office in 2024, the number of community health centers (puskesmas) conducting IVA screening and clinical breast examinations (Sadanis) in Southeast Sulawesi Province in 2023 was 197 out of a total of 307 existing puskesmas. For IVA screening among women aged 30–50, the coverage rate remains quite low. The percentage of community health centers conducting cervical cancer screening activities in Southeast Sulawesi Province in 2023 was 0.82%, 0.75% in 2022, and 0.70% in 2021. Although there has been an increase in the implementation of cervical cancer screening, this achievement is still far from the national target of 100%, and the percentage of cervical cancer screening implementation in Konawe Regency remains below the Southeast Sulawesi Province average, at 0.11% in 2022 and 0.79% in 2023. Out of 401,990 women aged 30–50, 247 positive IVA cases were identified, representing 7.52%, with Konawe Regency accounting for 58.50% of these cases [9].

Rural communities are a highly vulnerable group when it comes to health literacy. In addition to age-related factors, they are burdened by socioeconomic and cultural conditions, as well as low digital literacy. Limited access to information, education, and formal schooling further widens this gap. This vulnerability is exacerbated by the prevalence of health misinformation and hoaxes in the digital world, which easily confuse rural communities unaccustomed to critical thinking [10].

According to Sartono Kartodirjo (cited by Hari Poerwanto, 2000), as described in Budiono et al. [11] the condition of the majority of the rural population in Indonesia at that time was characterized by two main issues: poverty and a lack of initiative (inertia). The poverty they experienced was not a simple matter but a complex, interrelated problem, characterized by low production output, high unemployment, nutritional and health issues, and high rates of disease and illiteracy. On the other hand, the problem of lack of initiative was reflected in a tendency to resign oneself to fate, a lack of initiative, excessive dependence on others, and a strong belief in the supernatural. Based on the results of a preliminary study conducted at the Laosu Community Health Center in Konawe Regency, one case of cervical cancer was identified in 2024, and the patient is currently undergoing chemotherapy. Additionally, it was found that participation rates in early cervical cancer screening using the IVA test remain very low. In 2022, out of a target of 141 women aged 30–50, only 18 women (12.76% of the total 701 women) came for an IVA test, while in 2024, only 9 out of a target of 173 women (5.20% of the total 862 women) underwent the test. Participation in IVA screening in the Laosu Community Health Center's service area remains lower compared to the Sampara Community Health Center's service area, with 19 women (6.98%) participating in 2024, and the Morosi Community Health Center, with 20 participants (9.05%) in the same year. Although this activity is provided as a free government program, its achievement has continued to decline and remains far from the national target of 50% by 2019 [12], revealing a significant gap in cervical cancer early detection coverage.

Therefore, this study aimed to analyze the structural relationship and the direct and indirect associations of sociocultural factors and health literacy levels with cervical cancer early detection behavior among women in reproductive-age couples in the service area of the Laosu Community Health Center. Understanding whether health literacy mediates the impact of sociocultural barriers, or whether sociocultural factors independently override health literacy, is crucial. The results of this study are expected to provide valuable insights for health policymakers in designing culturally-sensitive interventions to effectively accelerate the expansion of cervical cancer screening coverage in rural communities.

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MATERIALS AND METHODS

Study design and setting

This study used a quantitative analytical cross-sectional design. The study was conducted in the service area of the Laosu Community Health Center, Konawe Regency, Southeast Sulawesi Province, Indonesia, in 2025.

Population and sample

The study population consisted of women in reproductive-age couples, locally referred to as couples of reproductive age (CRA), in the Laosu Community Health Center working area in 2025. A total of 278 respondents were included in this study and selected using a simple random sampling technique. The inclusion criteria were women of reproductive age who lived in the Laosu Community Health Center working area, were willing to participate, and were able to provide information related to cervical cancer early detection. Respondents who were unwilling to participate or provided incomplete questionnaire responses were excluded from the study.

Variables and instrument

The study examined sociocultural factors, health literacy levels, and early detection behavior for cervical cancer. Sociocultural factors included stigma and shame, husband's support, religious beliefs, and traditional values. Health literacy included the ability to access, understand, evaluate, and apply health information. Early detection behavior was measured based on whether respondents had undergone cervical cancer screening, such as visual inspection with acetic acid (VIA) or Pap smear examination.

Data were collected using a structured questionnaire containing items related to the study variables. The responses were scored according to the scoring system used in the instrument and then categorized into low, high, or very high levels based on the predetermined scoring criteria. For negatively worded items, reverse coding was applied so that the interpretation of scores was consistent with the direction of the measured construct.

Data analysis

Univariate analysis was used to describe respondent characteristics and research variables. Bivariate and multivariate analyses were conducted using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4 software to examine direct and indirect relationships among constructs. The measurement model was evaluated using outer loading, average variance extracted (AVE), cross-loading, and composite reliability. The structural model was evaluated using path coefficients, t-statistics, p-values, and R-square values obtained through bootstrap resampling.

Ethical considerations

This study was conducted in accordance with ethical principles for research involving human participants. All respondents were informed about the study objectives, voluntary participation, confidentiality, and anonymity. Written informed consent was obtained from all respondents before data collection. No personally identifiable information was collected or reported in this study.

RESULTS

Table 1 presents the demographic characteristics of the respondents, including age, education level, occupation, monthly income, and number of children among women in reproductive-age couples in the Laosu Community Health Center working area in 2025.

Table 1. Respondent characteristics

Variables	Frequency	Percentage (%)
Age		
30 – 34 Years	97	34.89
35 – 39 Years	56	20.15
40 – 44 Years	81	29.13
45 – 50 Years	44	15.83
Education		
Elementary School	44	15.83
Junior High School	66	23.74
Senior High School	128	46.04

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Higher Education	40	14.39
Work		
Housewife	239	85.97
Civil Servant	27	9.71
Private Employee	5	1.80
Others	7	2.52
Monthly Income		
<Rp.1500.000	195	70.14
Rp.1.500.000-Rp.3.000.000	49	17.62
Rp.3.000.000-Rp 5.000.000	28	10.08
>Rp.5.000.000	6	2.16
Number of Children		
0	23	8.28
1	42	15.11
2	121	43.52
> 3	92	33.09

Source: Primary Data, 2025

Based on Table 1, most respondents were aged 30–34 years, accounting for 97 respondents (34.89%), while the smallest proportion was in the 45–50 years age group, with 44 respondents (15.83%). Based on educational level, most respondents had completed senior high school education, totaling 128 respondents (46.04%), whereas respondents with higher education were the least represented, with 40 respondents (14.39%). In terms of occupation, most respondents were housewives, comprising 239 respondents (85.97%), while private employees constituted the smallest group, with only 5 respondents (1.80%). Regarding monthly income, most respondents earned less than Rp1,500,000 per month, totaling 195 respondents (70.14%), whereas only 6 respondents (2.16%) had an income above Rp5,000,000. Based on the number of children, most respondents had two children, accounting for 121 respondents (43.52%), while respondents with no children represented the smallest proportion, with 23 respondents (8.28%).

Table 2. Univariate analysis of sociocultural factors, health literacy, and early detection of cervical cancer
Sociocultural Variables (X1)
Stigma and Shame {X1.1}

No item	STS	TS	S	SS	n	Score	Percentage (%)	Description
P1	11	70	155	42	278	606	54.5	High Stigma
P2	2	67	141	68	278	595	53.5	High Stigma
P3	3	65	156	54	278	573	51.5	High Stigma
P4	6	59	149	64	278	563	50.6	High Stigma
P5	0	41	89	148	278	449	40.4	High Stigma
P6	5	55	136	82	278	539	48.5	High Stigma
P7	4	29	79	166	278	427	38.4	High Stigma
P8	5	69	116	88	278	547	49.2	High Stigma

Husband's Support {X1.2}

No item	Yes	No	N	Score	Percentage (%)	Description
P1	210	68	278	210	75.5	High
P2	106	172	278	106	38.1	Low

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P3	101	177	278	101	36.3	Low
P4	148	130	278	148	53.2	High
P5	87	191	278	87	31.3	Low
P6	148	130	278	148	53.2	High
P7	93	185	278	93	33.5	Low
P8	98	180	278	98	35.3	Low
P9	169	109	278	169	60.8	High
P10	227	51	278	227	81.7	Very High
P11	201	72	278	201	72.3	High
P12	185	93	278	185	66.5	High
P13	173	105	278	173	62.2	High
P14	201	77	278	201	72.3	High
P15	246	32	278	246	88.5	Very High
P16	231	47	278	231	83.1	Very High
P17	228	50	278	228	82.0	Very High
P18	259	19	278	259	93.2	Very High
P19	240	38	278	240	86.3	Very High
P20	205	73	278	205	73.7	High

Religious Beliefs {X1.3}

No item	STS	TS	S	SS	n	Score	Percentage (%)	Description
P1	1	18	201	58	278	872	78.4	Strong Religious Beliefs
P2	3	3	209	63	278	888	79.9	Strong Religious Beliefs
P3	26	206	32	14	278	800	71.9	Strong Religious Beliefs
P4	16	149	80	33	278	686	61.7	Strong Religious Beliefs

Traditional Value {X1.4}

No item	STS	TS	S	SS	n	Score	Percentage (%)	Description
P1	8	169	97	4	278	737	66.3	Strong traditional values
P2	3	182	72	21	278	723	65.0	Strong traditional values
P3	4	192	77	5	278	751	67.5	Strong traditional values
P4	10	197	66	5	278	768	69.1	Strong traditional values

Health Literacy Variables (Y1)

Ability to Access Information {Y1.1}

No item	SS	S	M	SM	n	Score	Percentage (%)	Description
P1	40	187	47	4	278	571	51.3	Low
P2	31	194	51	2	278	580	52.2	Low
P3	20	185	68	5	278	614	55.2	Low
P4	42	163	67	6	278	596	53.6	Low

Ability to Understand Information {Y1.2}

No item	SS	S	M	SM	n	Score	Percentage (%)	Description
P1	24	91	140	20	278	706	63.5	High
P2	14	70	179	15	278	751	67.5	High
P3	16	109	127	26	278	719	64.7	High
P4	12	72	169	25	278	763	68.6	High

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P5	17	62	187	12	278	750	67.4	High
P6	30	118	126	4	278	660	59.4	Low

Ability to Evaluate Information {Y1.3}

No item	SS	S	M	SM	n	Score	Percentage (%)	Description
P1	40	131	98	9	278	632	56.8	Low
P2	38	154	83	3	278	607	54.6	Low
P3	40	151	84	3	278	606	54.5	Low

Ability to Apply Information {Y1.4}

No item	SS	S	M	SM	n	Score	Percentage (%)	Description
P1	62	114	97	5	278	601	54.0	Low
P2	57	124	91	6	278	608	54.7	Low
P3	21	49	188	20	278	763	68.6	High

Early Detection of Cervical Cancer (Y2)

Category	Frequency (f)	Percentage (%)
Yes	21	7.55
No	257	92.45
Total	278	100

Source: *Primary Data, 2025*

Sociocultural Variables

In Table 2, the sociocultural variable on the stigma and shame indicators was reverse-coded in the score calculation because the questionnaire items were stated in negative statements. Therefore, lower scores indicate higher levels of stigma and shame among respondents, whereas higher scores indicate lower levels of stigma and shame.

The findings showed that all stigma and shame items were categorized as high stigma. The highest level of stigma was found in item P7, with a score of 427 (38.4%), followed by P5 with a score of 449 (40.4%), P6 with 539 (48.5%), P8 with 547 (49.2%), and P4 with 563 (50.6%). These findings indicate that shame, fear of social judgment, and discomfort related to reproductive health examinations remained important barriers among respondents.

For husband's support, several indicators were categorized as low, including P5 (31.3%), P7 (33.5%), P8 (35.3%), P3 (36.3%), and P2 (38.1%). Meanwhile, several indicators were categorized as high to very high, particularly P18 (93.2%), P15 (88.5%), P19 (86.3%), P16 (83.1%), and P17 (82.0%). Overall, husband's support showed mixed findings. Emotional and practical support appeared relatively strong, whereas informational and motivational support remained limited.

Respondents' responses to the religious belief variable showed that all statement items were categorized as strong religious beliefs. The highest score was found in P2, with a score of 888 (79.9%), followed by P1 with 872 (78.4%). P3 and P4 also showed strong religious belief scores, with 800 (71.9%) and 686 (61.7%), respectively. Overall, these findings indicate that religious beliefs were relatively strong among respondents and may support health-maintaining behavior.

For traditional values, all items showed relatively high scores, with the highest score found in P4 (768; 69.1%), followed by P3 (751; 67.5%), P1 (737; 66.3%), and P2 (723; 65.0%). Since these items were related to traditional norms surrounding reproductive health examinations, the findings should be interpreted carefully according to the direction of item coding. Overall, traditional values may still influence respondents' attitudes toward cervical cancer screening.

Health Literacy Variables

Respondents' responses to the ability to access health information showed that all statement items were categorized as low. P1 obtained a score of 571 (51.3%), P2 obtained 580 (52.2%), P3 obtained 614 (55.2%), and P4 obtained 596 (53.6%). Overall, these findings indicate that respondents' ability to access information related to cervical cancer and early detection remained low.

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Respondents' responses to the ability to understand health information showed that most items were categorized as high, although one item remained low. High scores were found in P1 (706; 63.5%), P2 (751; 67.5%), P3 (719; 64.7%), P4 (763; 68.6%), and P5 (750; 67.4%). However, P6 obtained a lower score of 660 (59.4%) and was categorized as low. Overall, these findings suggest that respondents generally had a good ability to understand health information, although understanding of more specific and technical information still needs improvement.

Respondents' responses to the ability to evaluate health information showed that all statement items were categorized as low. P1 obtained a score of 632 (56.8%), P2 obtained 607 (54.6%), and P3 obtained 606 (54.5%). Overall, these findings indicate that respondents' ability to evaluate health information remained low, particularly in determining the appropriate time for screening and distinguishing reliable information from misinformation.

Respondents' responses to the ability to apply health information showed that most statement items were categorized as low, with one item categorized as high. P1 obtained a score of 601 (54.0%), while P2 obtained 608 (54.7%), both categorized as low. However, P3 obtained a higher score of 763 (68.6%) and was categorized as high. Overall, these findings indicate that respondents' ability to apply health information was still not optimal, particularly in making decisions to undergo VIA examinations and following healthcare recommendations.

Early Detection of Cervical Cancer

Based on Table 2, most respondents had not undergone early detection of cervical cancer, accounting for 257 respondents (92.45%), while only 21 respondents (7.55%) had undergone early detection. These findings indicate that participation in cervical cancer screening among respondents remained very low.

Multivariate Analysis

The multivariate analysis was conducted using PLS-SEM with SmartPLS 4 software. The analysis included evaluation of the measurement model, also known as the outer model, to assess indicator validity, including convergent validity and discriminant validity, as well as construct reliability. In addition, the structural model, or inner model, was evaluated to examine the relationships between constructs, the significance of path coefficients, and the R-square values of the research model. Hypothesis testing in the structural model was performed using the bootstrap resampling technique.

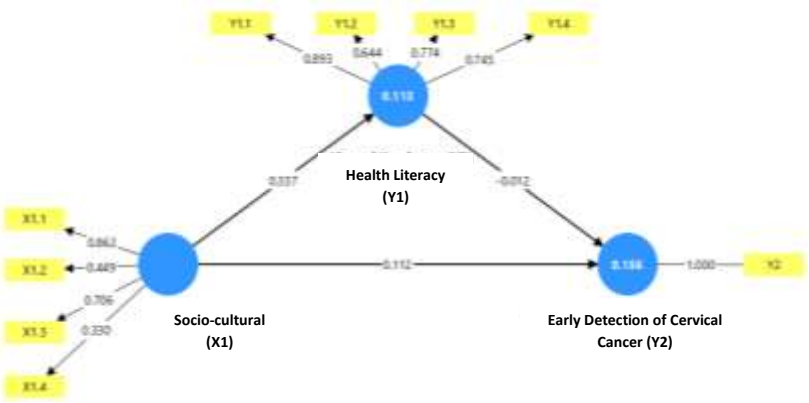

Figure 1. Initial outer loading model

Table 3. Initial outer loading values

Variable	Indicators	Outer Loading	Average variance extracted (AVE)	Description
Socio-cultural (X1)	Stigma and Shame {X1.1}	0.862	0.388	Valid
	Husband's Support {X1.2}	0.449		Not Valid

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	Religious Beliefs {X1.3}	0.706		Valid
	Traditional value {X1.4}	0.330		Not Valid
Health literacy (Y1)	Ability to Access Information {Y1.1}	0.893	0.592	Valid
	Ability to Understand Information {Y1.2}	0.644		Not Valid
	Ability to Evaluate Information {Y1.3}	0.774		Valid
	Ability to Apply Information {Y1.4}	0.745		Valid
Early Detection of cervical cancer (Y2)	Early Detection of cervical cancer (Y2)	1.000		Valid

Based on the initial analysis of the full measurement model, several indicators did not meet the recommended outer loading threshold of ≥0.70. The indicators with low outer loading values were husband's support (X1.2 = 0.449), traditional value (X1.4 = 0.330), and ability to understand information (Y1.2 = 0.644). In addition, the socio-cultural construct had an AVE value of 0.388, which was below the recommended threshold of ≥0.50. These findings indicate that several indicators did not adequately represent their respective latent constructs and contributed to the low convergent validity of the measurement model. Therefore, X1.2, X1.4, and Y1.2 were eliminated, and the model was reanalyzed to improve the validity and reliability of the remaining indicators.

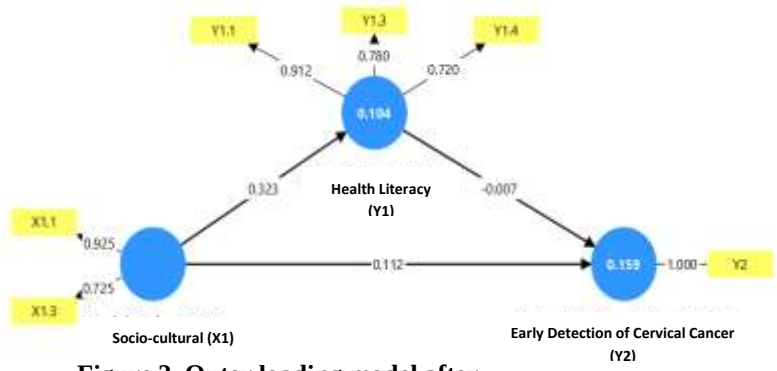

Figure 2. Outer loading model after indicator elimination

Table 4. Revised outer loading values after indicator elimination

Variable	Indicators	Outer Loading	Average variance extracted (AVE)	Description
Socio-cultural (X1)	Stigma and Shame {X1.1}	0.925	0.691	Valid
	Religious Beliefs {X1.3}	0.725		Valid
Health literacy (Y1)	Ability to Access Information {Y1.1}	0.912	0.652	Valid
	Ability to Evaluate Information {Y1.3}	0.780		Valid
	Ability to Apply Information {Y1.4}	0.720		Valid

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Early Detection of cervical cancer (Y2)	Early Detection of cervical cancer (Y2)	1.000	Valid

All retained indicators had outer loading values above 0.70, and all constructs had AVE values above 0.50. These results indicate that the revised measurement model met the convergent validity criteria and that the retained indicators adequately represented their respective constructs.

Table 5. Cross-loading values

	Early Detection of Cervical Cancer (Y2)	Health Literacy (Y1)	Socio-Cultural (X1)
Stigma and Shame {X1.1}	0.430	0.296	0.925
Religious Beliefs {X1.3}	0.176	0.238	0.725
Ability to Access Information {Y1.1}	0.164	0.912	0.339
Ability to Evaluate Information {Y1.3}	0.019	0.780	0.195
Ability to Apply Information {Y1.4}	0.003	0.720	0.202
Early Detection of cervical cancer (Y2)	1.000	0.104	0.398

The cross-loading results showed that the stigma and shame indicator and the religious belief indicator had the highest loading values on the sociocultural construct, with values of 0.925 and 0.725, respectively. The indicators of ability to access information, ability to evaluate information, and ability to apply information had the highest loading values on the health literacy construct, with values of 0.912, 0.780, and 0.720, respectively. Meanwhile, the early detection of cervical cancer variable had a loading value of 1.000 on its own construct, which was higher than its loading on other constructs. These findings indicate that there were no cross-loading problems and that the measurement model met the discriminant validity criteria.

Table 6. Composite reliability values

Variable	Composite Reliability	Description
Health literacy (Y1)	0.897	Reliable
Socio-cultural (X1)	0.719	Reliable

The composite reliability values for health literacy and sociocultural factors were 0.897 and 0.719, respectively. Both values exceeded the recommended threshold of 0.70, indicating that the constructs had acceptable internal consistency reliability.

Table 7. R-square values

Structural Model	Endogenous Variable	(R^2)
1	Early Detection of Cervical Cancer (Y2)	0.159
2	Health Literacy (Y1)	0.104

The R-square value for the Cervical Cancer Early Detection variable (Y2) was 0.159, indicating that 15.9% of the variance in cervical cancer early detection could be explained by Sociocultural Factors (X1) and Health Literacy (Y1), while the remaining 84.1% was influenced by other factors outside the research model. Meanwhile, the R-square value for the Health Literacy variable (Y1) was

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0.104, indicating that 10.4% of the variance in health literacy could be explained by Sociocultural Factors (X1), whereas 89.6% was influenced by other variables not examined in this study. Overall, both R-square values were low, indicating that the model had limited explanatory power. This suggests that other variables not included in the model, such as service accessibility, perceived risk, previous screening experience, family decision-making, and healthcare provider communication, may also influence cervical cancer early detection behavior.

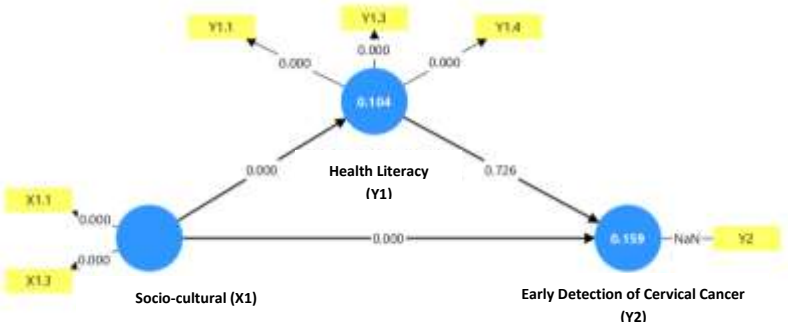

Figure 3. Path coefficient diagram

Table 8. Path coefficients and direct hypothesis testing

Hypothesis	Original Sample (O)	Sample Mean	Standard deviation (STDEV)	T Statistics (|O/STDEV|)	P-value	Description
Socio-cultural → Health Literacy	0.323	0.329	0.071	4.539	0.000	Accepted
Socio-cultural → Early Detection of Cervical Cancer	0.112	0.113	0.023	4.962	0.000	Accepted
Health Literacy → Early Detection of Cervical Cancer	-0.007	-0.007	0.021	0.351	0.726	Rejected

Table 9. Indirect effect hypothesis testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P-value
Socio-cultural → Health Literacy → Early Detection of Cervical Cancer	-0.002	-0.003	0.007	0.325	0.745

Based on the hypothesis testing results in Table 8, three hypotheses were tested, of which two were accepted and one was rejected. Sociocultural factors were positively and significantly associated with health literacy (β = 0.323; t = 4.539; p = 0.000), indicating that H1 was accepted. Sociocultural factors were also positively and significantly associated with cervical cancer early detection (β = 0.112; t = 4.962; p = 0.000), supporting H2. However, health literacy was not significantly associated with cervical cancer early detection (β = –0.007; t = 0.351; p = 0.726), leading to the rejection of H3.

Furthermore, the indirect effect test in Table 9 showed that health literacy did not mediate the relationship between sociocultural factors and cervical cancer early detection (β = –0.002; t = 0.325; p = 0.745).

DISCUSSION

The Association between Sociocultural Factors and Health Literacy

This study found that sociocultural factors were significantly associated with health literacy in the PLS-SEM model, although the explanatory power was relatively low (R^2 = 10.4%). This finding suggests that sociocultural aspects may contribute to health literacy, but other factors outside the model also play important roles. Stigma and feelings of shame emerged as the main barriers. Women who experience higher levels of embarrassment particularly related to exposing their bodies and undergoing reproductive

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examinations tend to have lower ability to access and seek information about cervical cancer. Fear of social judgment, including being perceived negatively by others, further discourages open discussion and information-seeking behavior. This finding is consistent with [13], who reported that social stigma limits individuals' willingness to access health information.

Communication barriers with healthcare providers also contribute to low health literacy. Discomfort in interacting with medical personnel reduces the opportunity to obtain accurate information, supporting Shaw, S.J. [14], who emphasized that cultural beliefs influence individuals' understanding of health information. In the descriptive findings, husband support, religious beliefs, and traditional values also reflected important contextual influences. However, husband support and traditional values were not retained in the final PLS-SEM measurement model because their outer loading values did not meet the convergent validity criterion. Therefore, these dimensions are interpreted descriptively rather than as retained indicators in the final structural model. Nielsen-Bohlman, L. [16] stated that cultural and religious beliefs shape how individuals perceive and respond to health information.

From the Health Belief Model (HBM) perspective, stigma and shame represent perceived barriers, while positive religious beliefs may represent perceived benefits. Descriptive findings on husband support may indicate possible cues to action, but this dimension was not retained in the final PLS-SEM measurement model. These factors may influence women's confidence (self-efficacy) in accessing and using health information.

The Association between Sociocultural Factors and Early Detection of Cervical Cancer

The findings showed that cervical cancer early detection behavior among respondents remained very low and was influenced by sociocultural factors. Stigma and feelings of shame emerged as the main barriers, particularly discomfort with exposing the body during medical examinations and fear of being perceived as impure after cervical examinations. High levels of stigma caused respondents to feel afraid, embarrassed, and reluctant to undergo VIA or Pap smear examinations. These findings are consistent with Liana, N. [13], who reported that cultural stigma, limited sexual education, and discomfort discussing reproductive health are major barriers to cervical cancer early detection.

The descriptive findings also showed that husband support and traditional values were relevant contextual issues in cervical cancer screening behavior. Limited involvement of husbands in providing information, attention, motivation, and emotional support may reduce women's confidence in undergoing screening examinations, whereas support from spouses may facilitate readiness for early detection. Nevertheless, because husband support and traditional value indicators were eliminated from the final measurement model, these findings should be interpreted as descriptive contextual information rather than as retained indicators in the final PLS-SEM construct.

The hypothesis testing results showed that sociocultural factors had a positive and significant effect on cervical cancer early detection ($\beta = 0.112$; $t = 4.962$; $p = 0.000$). This indicates that more supportive sociocultural conditions may facilitate cervical cancer early detection behavior. These findings are in line with studies by Izza, A. [17] and Njeru et al. [18], which reported that sociocultural factors play an important role in disease prevention behavior and health screening practices.

From the perspective of the Health Belief Model (HBM), stigma and shame represent perceived barriers that hinder health behavior, whereas positive religious beliefs may serve as perceived benefits that increase awareness of reproductive health maintenance. Descriptive findings on social support may also function as cues to action, but this dimension was not retained in the final PLS-SEM model. Thus, the final model supports a direct association between the retained sociocultural construct and cervical cancer early detection behavior.

The Association between Health Literacy and Early Detection of Cervical Cancer

The findings of this study indicate that, contrary to the initial hypothesis, health literacy does not have a statistically significant effect on early detection behavior for cervical cancer among respondents. Although a proportion of participants demonstrated adequate ability to understand health-related information, this competence did not translate into actual preventive actions such as visual inspection with acetic acid (VIA) or Pap smear examinations. This suggests a gap between cognitive understanding and behavioral implementation in the context of cervical cancer prevention.

Further analysis reveals that respondents exhibited limited capacity in accessing information related to cervical cancer prevention and early symptoms. This deficiency contributes to a low level of awareness regarding the importance of early detection. Additionally, inadequate skills in evaluating the credibility of health information make respondents more susceptible to misinformation and myths surrounding cervical cancer screening, thereby hindering appropriate health behaviors. Despite relatively sufficient educational backgrounds predominantly at the high school level which theoretically support basic health comprehension, critical dimensions of health

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literacy such as accessing, appraising, and applying information remain weak. Consequently, health literacy in this study fails to construct a strong perception of risk and benefit associated with early detection practices. From the perspective of the Health Belief Model (HBM), these findings highlight that knowledge alone is insufficient to drive health behavior change. Key constructs such as perceived susceptibility, perceived severity, perceived benefits, and perceived barriers play a crucial role. In this study, perceived barriers including stigma, embarrassment, limited autonomy in decision-making, and sociocultural influences such as spousal support and traditional beliefs were more dominant in shaping behavior. These barriers prevent health literacy from functioning effectively as self-efficacy, which is essential for initiating preventive actions.

The results of this study are not consistent with those reported by [19], who found that women with higher health literacy were 3.565 times more likely to engage in early detection practices. However, the present findings align with previous studies indicating that knowledge does not always lead to action. Ayamolowo et al. [20] demonstrated that while health literacy improved knowledge about cervical cancer prevention, it did not significantly influence participation in screening practices due to personal barriers such as fear and perceived lack of risk. Similarly, Widayanti et al. [21] as cited in [22], reported that fear, anxiety, and cultural taboos surrounding genital examinations contribute to low screening uptake despite adequate knowledge.

In conclusion, this study reinforces the notion that "knowing" does not necessarily lead to "doing." Health literacy, while important, is insufficient on its own to influence early detection behavior for cervical cancer. Social, psychological, and cultural factors remain critical determinants that must be addressed alongside educational interventions to improve screening participation.

The Indirect Association of Sociocultural Factors with Early Detection of Cervical Cancer through Health Literacy

The findings of this study indicate that sociocultural factors were directly associated with cervical cancer early detection behavior rather than indirectly associated through health literacy as a mediating variable. Although sociocultural factors significantly affect health literacy and also directly influence early detection practices, health literacy itself does not show a significant impact on screening behavior. This suggests that health literacy is not sufficient to bridge the relationship between sociocultural context and preventive health actions.

Sociocultural elements, particularly stigma, embarrassment, and religious beliefs retained in the final measurement model, appear to shape women's decisions more directly than their ability to understand health information. Feelings of discomfort during reproductive health examinations and fear of negative social judgment significantly reduce willingness to undergo screening. In this context, socially constructed norms may outweigh medical knowledge, shaping behavior based on perceived acceptability rather than factual understanding.

Cultural and religious perspectives further reinforce this pattern. Some respondents may rely on non-medical or spiritual interpretations of illness, which weakens the motivation to seek clinical screening despite prior knowledge. The descriptive results also indicate that limited support from husbands may reduce emotional encouragement and decision-making confidence; however, this variable was not retained in the final structural model.

On the other hand, health literacy in this study reflects a disparity between knowledge and action. While respondents generally demonstrate an adequate ability to comprehend basic health information, they lack the capacity to critically evaluate and apply it in real-life contexts. This gap, often described as the *knowledge–behavior gap*, is evident in the high proportion of respondents who did not participate in early detection practices. These findings are consistent with previous studies (e.g., Ayamolowo et al. [20] indicating that health literacy may improve knowledge but does not necessarily translate into screening behavior. Supporting evidence from Ghebrendrias, S. [23] highlights that fear, embarrassment, and cultural taboos are key barriers preventing women from accessing gynecological services, emphasizing the strong role of psychosocial factors over cognitive ones. This reinforces the notion that behavioral decisions are not solely determined by knowledge but are deeply embedded in social and cultural contexts.

From a demographic perspective, most respondents have a moderate educational background; however, education alone does not guarantee adequate health literacy. Economic limitations and family responsibilities further constrain access to healthcare services, shifting priorities away from preventive measures toward immediate household needs. These structural conditions intensify the influence of sociocultural barriers.

LIMITATIONS

This study has several limitations. First, the cross-sectional design limits causal interpretation because the exposure and outcome variables were measured at the same time. Second, early detection behavior was measured based on respondents' self-reported responses,

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which may be affected by recall bias or social desirability bias. Third, the R-square values were low, indicating that other important determinants of cervical cancer screening behavior were not included in the model. Factors such as service accessibility, perceived risk, previous screening experience, family decision-making, and healthcare provider communication may also influence screening behavior. Finally, this study was conducted only in the Laosu Community Health Center working area, so the findings may not be generalizable to other populations or settings.

CONCLUSION

Based on the findings of this study, early detection practices for cervical cancer among respondents remained low, with only 21 respondents (7.55%) reporting early detection. Sociocultural factors were significantly associated with early detection behavior, whereas health literacy was not significantly associated with early detection and did not mediate the relationship between sociocultural factors and screening behavior. The final measurement model retained stigma and shame and religious beliefs as indicators of the sociocultural construct, while husband support and traditional values were interpreted descriptively because they did not meet the outer loading criterion.

These findings indicate a knowledge-behavior gap, in which understanding health information does not necessarily lead to participation in cervical cancer screening. Therefore, interventions to increase cervical cancer early detection should not rely only on health education, but should also address stigma, shame, culturally sensitive communication, family support, and access to reliable screening services. Future studies should consider additional determinants such as service accessibility, perceived risk, previous screening experience, family decision-making, and healthcare provider communication.

Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Conflict of Interest

The authors declare no conflict of interest.

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Author Contributions

T.M.J. contributed to the study conception, data collection, data analysis, data interpretation, and manuscript drafting. S.D.P. contributed to study supervision, methodological guidance, data interpretation, and critical revision of the manuscript. I.M.C.B. contributed to data interpretation, scientific input, and critical revision of the manuscript. All authors read and approved the final manuscript.

REFERENCES

1. Kementerian Kesehatan Republik Indonesia. Rencana Kanker Nasional 2024–2034: Strategi Indonesia dalam Upaya Melawan Kanker. Jakarta: Kementerian Kesehatan Republik Indonesia; 2024.
2. Haryanto E, et al. Epidemiologi Kanker dan Penyakit Kronis. Purbalingga: Eureka Media Aksara; 2024.
3. Guida F, Kidman R, Ferlay J, Schüz J, Soerjomataram I, Kithaka B, et al. Global and regional estimates of orphans attributed to maternal cancer mortality in 2020. Nature Medicine. 2022;28:2563–2572. doi:10.1038/s41591-022-02109-2.
4. Global Cancer Observatory. Global Cancer Statistics 2020. Lyon: International Agency for Research on Cancer; 2020.
5. World Health Organization. Cervical cancer. Geneva: World Health Organization; 2024. Available from: https://www.who.int/news-room/fact-sheets/detail/cervical-cancer.
6. Stelzle D, Tanaka LF, Lee KK, Khalil AI, Baussano I, Shah ASV, et al. Estimates of the global burden of cervical cancer associated with HIV. The Lancet Global Health. 2021;9(2):e161–e169. doi:10.1016/S2214-109X(20)30459-9.
7. Adyani K, Realita F. Factors that influence the participation among women in Inspection Visual Acetic acid (IVA) test. Jurnal Aisyah: Jurnal Ilmu Kesehatan. 2020;5(2):115–121.
8. Kementerian Kesehatan Republik Indonesia. Profil Kesehatan Indonesia Tahun 2020. Jakarta: Kementerian Kesehatan Republik Indonesia; 2021.

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IJCSRR @ 2026
www.ijcsrr.org

9. Dinas Kesehatan Provinsi Sulawesi Tenggara. Profil Kesehatan Sulawesi Tenggara Tahun 2023. Kendari: Dinas Kesehatan Provinsi Sulawesi Tenggara; 2023.
10. Al-Farrel, Solihin O. Literasi kesehatan dan dampaknya terhadap kesehatan masyarakat: Tinjauan komprehensif. Jurnal Ilmu Komunikasi. 2025;12(3):123–135.
11. Budiono A, Saepudin E. Literasi informasi masyarakat pedesaan dalam program pemberdayaan masyarakat di Kecamatan Cikancung Bandung. Jurnal Kajian Informasi dan Perpustakaan. 2015;3(2):221–234.
12. Menteri Kesehatan Republik Indonesia. Peraturan Menteri Kesehatan Republik Indonesia Nomor 34 Tahun 2015 tentang Penanggulangan Kanker Payudara dan Kanker Leher Rahim. Jakarta: Kementerian Kesehatan Republik Indonesia; 2015.
13. Liana N, Rasyid L, Putriyuni A, Nurwiyeni, Oktora MZ, Aliefia D. Persepsi stigma kesehatan reproduksi sebagai faktor penghambat kepatuhan skrining kanker serviks. Journal of Public Health Science. 2025;2(2). doi:10.70248/jophs.v2i2.2272.
14. Shaw SJ, Huebner C, Armin J, Orzech K, Vivian J. The role of culture in health literacy and chronic disease screening and management. Journal of Immigrant and Minority Health. 2009;11(6):460–467. doi:10.1007/s10903-008-9135-5.
15. La Patilaiya H, Aja N, Yunus T. Risk factors associated with early detection of cervical cancer by the IVA method in women of childbearing age in the City of Ternate. International Journal of Science, Technology & Management. 2021;2(4). doi:10.46729/ijstm.v2i4.272.
16. Nielsen-Bohlman L, Panzer AM, Kindig DA, editors. Health Literacy: A Prescription to End Confusion. Washington, DC: National Academies Press; 2004.
17. Izza A, Mulawardhana P, Handayani S. Knowledge, attitude, and culture influence visual inspection with acetic acid service use. Jurnal Ners. 2020;15(2). doi:10.20473/jn.v15i2.21250.
18. Njeru KK, Gontier C, Atuwo I, Njoroge DK, Owino A, Mwaura P, Cheruyoit D, Muthee A, Wafula D, Some E. Sociocultural factors influencing cervical pre-cancer screening among women attending Mbagathi level four hospital, Nairobi, Kenya. African Journal of Empirical Research. 2025;6(4):97–110. doi:10.51867/ajernet.6.4.9.
19. Paramita KHP, Astuti IW, Pramitaresthi IGA, Sanjiwani IA. Hubungan literasi kesehatan dengan perilaku deteksi dini kanker serviks pada wanita usia subur (WUS). Community of Publishing in Nursing. 2025;13(2):214–221. doi:10.24843/coping.2025.v13.i02.p12.
20. Ayamolowo SJ, Akinrinde LF, Oginni MO, Ayamolowo LB. The influence of health literacy on knowledge of cervical cancer prevention and screening practices among female undergraduates at a university in Southwest Nigeria. Africa Journal of Nursing and Midwifery. 2020;22(1):1–14. doi:10.25159/2520-5293/6615.
21. Widayanti P. Hubungan dukungan suami, motivasi dan sikap dengan perilaku pemeriksaan inspeksi visual asam asetat (IVA) pada pasangan usia subur di wilayah kerja Puskesmas Wirobrajan Kota Yogyakarta Tahun 2017. Yogyakarta: Politeknik Kesehatan Kementerian Kesehatan Yogyakarta; 2018.
22. Azlina F, RF. Mengenal Kanker Serviks dan Upaya dalam Meningkatkan Deteksi Dini. 1st ed. Jakarta: Nuansa Fajar Cemerlang; 2025.
23. Ghebrendrias S, Pfeil S, Crouthamel B, Chalmiers M, Kully G, Mody S. An examination of misconceptions and their impact on cervical cancer prevention practices among Sub-Saharan African and Middle Eastern refugees. Health Equity. 2021;5(1):382–389. doi:10.1089/heq.2020.0125.

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