



American Journal of Medicine and Health Care (AJMHC)

VOLUME 1 ISSUE 2 (2026)



PUBLISHED BY
E-PALLI PUBLISHERS, DELAWARE, USA

Health Literacy and Intention to Undergo Cervical Cancer Screening among Married Women in Bangladesh: The Roles of Perceived Benefits and Social Support

Md Amjad Hossain Chowdhury^{1*}, Sujan Ahmed², Samia Akter Bristy³, Mehedee Hasan⁴,

Israt Jahan Dipty⁵, Md. Majedul Islam⁶, Syeda Sumaiya⁶

Article Information

Received: July 13, 2026

Accepted: September 29, 2026

Published: October 26, 2026

Keywords

Bangladesh Cervical Cancer Screening, Health Literacy, Married Women, Perceived Benefits, Screening Intention, Social Support

ABSTRACT

The availability of screening services is not the only factor that determines whether women access screening—they must also be able to comprehend information about cervical cancer screening services, see the advantages, ask for support, and turn comprehension and incentives into intention to access services. The present study aimed to investigate the association of screening intention with health literacy of, perceived benefits of, and social support towards cervical cancer screening among married women in Bangladesh. The design of the study was quantitative survey and the 720 valid questionnaires collected were analyzed using the PLS-SEM approach. Measurement model revealed acceptable indicator reliability, internal consistency and convergent validity, while also achieving acceptable discriminant validity. The structural model accounted for 37.6% variance of perceived benefits, and 56.9% variance of the screening intention. The effect of health literacy was significant about perceived benefits ($\beta = 0.528$) and screening intention ($\beta = 0.348$). Social support had a positive impact on perceived benefits ($\beta = 0.315$) and screening intention ($\beta = 0.224$). The perceived benefit was also significantly positively associated with screening intention ($\beta = 0.428$). Further, the relationship between health literacy and screening intention also was significantly mediated by perceived benefits (indirect $\beta = 0.226$). The findings indicate that interventions targeting the continuation of stronger information regarding the benefit of screening, to better understand screening, and to increase support from their social environment may improve screening intentions among married women, when screening is professionally recommended and clinically indicated.

INTRODUCTION

Cervical cancer screening is crucial for preventive care as it can detect potentially problematic changes in the cervix before full-blown disease occurs. However, availability of services does not necessarily translate into a willingness to attend. Women need to be informed, understand the purpose of screening, consider its potential for benefit and determine their own personal and social resources for taking action. Screening intention thus involves more than mere awareness. It is a product of a decision making mechanism where information, beliefs, and interpersonal situations are all coming into play (Bando *et al.*, 2025).

This separation is particularly relevant for screening that is recommended prior to the onset of symptoms. A woman might have heard about cervical cancer screening, but not understand the value of it, or how to evaluate information or seek professional advice. She might also have a general grasp of the purpose of screening, but be unclear about practicalities like appointments, travel, or household duties. These gaps can weaken the movement from awareness to intended action (Garcia Iurgain, 2025). The concept of cervical cancer screening health literacy serves as a valuable perspective in understanding this issue. In this current research it means being able to find good information, understand information from health professionals, understand the rationale for screening,

be able to identify good information as opposed to misleading information, and use information to raise questions. These skills may help to make information more actionable and can affect a woman's assessment of the usefulness of screening.

A second key mechanism is perceived benefits. Preventive Screening involves time and effort, and is often done when there are no signs or symptoms. If women think screening can help them detect disease as early as possible, make health decisions, and get professional recommendations and/or follow-up, they may be more likely to consider screening. This may hence offer a valuable psychological bridge for the translation of health literacy to behavioural readiness, through benefit recognition.

Social relations also imply screening decisions. Having someone, such as a husband, relatives or a confidant, can offer encouragement, reassurance, assistance with appointments, transportation or help with household tasks. This kind of support is not meant to take the place of personal decision making. Instead, it can establish circumstances where an educated health decision is more easily thought of and followed (Islam *et al.*, 2025).

In this study, an integrated model of cervical cancer screening intention among married women in Bangladesh is developed. Health literacy and social support are suggested to impact perceived benefits and to directly

¹ Community health behavior and Education, Georgia Southern University, Bangladesh

² Dept of School of Social Work, Excelsia University College, Bangladesh

³ Dept of Pharmacy, Independent University, Bangladesh, Bangladesh

⁴ Masters of Pharmaceuticals Science, State University of Bangladesh, Bangladesh

⁵ Masters of Research Pharmaceuticals Science, University of Cyberjaya, Malaysia

⁶ Pharmaceuticals Science, North South University, Bangladesh

* Corresponding author's e-mail: mc47303@georgiasouthern.edu

impact screening intention. Perceived benefits are regarded as a mediator between health literacy and intentions, as well as a direct predictor of intentions. This structure differentiates between direct informational pathway and indirect pathway via benefit recognition.

The study makes contributions in the following ways: screening health literacy be regarded as an applied capacity, as opposed to merely awareness; the inclusion of social support as a unique explanatory variable; the inclusion of perceived benefits as an explanatory mechanism. The main aim was to investigate the relationship of health literacy with perceived benefits and social support related to screening intention (Harsch *et al.*, 2025). An additional goal was to find out whether there is mediation between perceived benefits and health literacy on the one hand and screening intention on the other. Partial least squares structural equation modeling was used to assess the proposed model.

In terms of public health, the combined method is applicable since it is located between the initial awareness and future utilization of services. Improved understanding of factors linked to intention can be used to identify areas of a screening pathway where it could be weak prior to attendance. With information that is hard to interpret, benefits will stay abstract, and if there is little practical support available, awareness can fail to get to a clear plan. Investigating these mechanisms as a whole could thus help create, more responsive to women's actual decision processes, screening communication.

LITERATURE REVIEW

Cervical Cancer Screening Health Literacy

Health literacy is not simply being aware of the name of a disease or that a health service actually exists. In the context of screening for cervical cancer, it implies finding out how to find trustworthy information, how to understand information that is provided by professionals, how to evaluate the quality of the information, and how to use information to communicate and make decisions (Harsch *et al.*, 2025). A woman, therefore, can become aware of the screening and yet, not be able to interpret its meaning, or apply screening information to herself. Why it is important to differentiate between awareness and usable knowledge is the fact that in many cases of taking preventive actions, an individual may have to process the information before deciding whether or how to take action (Ripon *et al.*, 2026).

Health literacy can be improved through stronger screening and lessen the informational uncertainty. Women who know the reasons for screening will be more likely to know that screening is not meant to diagnose women who already have the disease, but is meant to find changes that may be of concern (Alam *et al.*, 2022). Knowing how to reliably distinguish guidance from misleading information may also help to prevent confusion when making decisions. Women who are able to create questions that are relevant to health care providers might be better equipped to ask questions around eligibility, timing, and screening options available

(Uddin, 2026).

Health Literacy can impact screening intention in two ways: directly and indirectly. But understanding directly can make screening seem less daunting and increase motivation to get information or to schedule an appointment. Health literacy can indirectly influence women's screening appraisals (Zhang *et al.*, 2022). The potential health benefits of screening may come to the fore if the preventive function of screening is understood. Thus, the current model posits that health literacy is a precondition of perceived benefits and directly predicts screening intention (Kiran *et al.*, 2024).

Perceived Benefits of Screening

The perceived benefits are the benefits an individual believes to be a result of the health-related behavior. Benefits for cervical cancer screening include the identification of health changes at an early stage, the ability to make health decisions, and timely advice and/or follow-up when needed (Abubakari *et al.*, 2025). This assessment is significant as screening could result in action before symptoms appear. This urge to do something will be greater if the benefits of screening are known and relevant (Abubakari *et al.*, 2025).

Perceived benefits can also serve as a link between information and intention to act. Information about health that is motivational will modify the person's appraisal of an action. A woman who has a clear understanding of the purpose of screening is more likely to acknowledge its potential to prevent disease (Harun *et al.*, 2026). Positive social communication can support this assessment by reinforcing assessment of screening and decreasing uncertainty. Perceived benefits are thus theorized to be a key mechanism linking health literacy and social factors to intention to screen (Baharum *et al.*, 2020).

Social Support for Screening

Social Support is emotional reassurance, encouragement, information and practical assistance provided through interpersonal relationships. For the purposes of this study, support is defined as husband support, someone close to you to offer encouragement, someone to help set up an appointment, help with transportation and a trusted person you could talk to about your concerns for screening. Psychological difficulties and hesitations and practical difficulties may be reduced through these kinds of support (Ozturk *et al.*, 2024).

In two ways, support can impact screening. In the first place, positive perceptions about screening can be reinforced by trusted persons and women can be encouraged to view screening as worthwhile. Secondly, practical supports can help to make the intended action easier to take (De Fouw *et al.*, 2023). Screening can be travelling, booking appointments, waiting time or temporary re-distribution of household roles. Supportive relationships can thus supplement personal health literacy in order to make a more enabling context for action (Bawuah *et al.*, 2025).

Screening Intention

Screening intention is willfulness to perform cervical cancer screening where and when it is relevant. It is more expensive than a general assent to screening. Intention in this study refers to the plan to get screened, the plan to find out how to get screened, willingness to make an appointment, and trying to make it to the screening (Hernandez *et al.*, 2026). These elements reflect readiness to perform behaviour as opposed to generic advocacy for preventative health care.

Although it may not ensure subsequent attendance, it is an important proximal outcome to consider since preventive behavior typically needs a certain amount of commitment to attend (Khalednejad *et al.*, 2023). An examination of intentions provides the opportunity to determine the factors related to readiness prior to actual use of services. Screening intention is here considered to be the ultimate endogenous construct of the structural model.

Hypothesis Development

Health literacy is expected to boost perceived benefits because women with the capacity to access, understand, and assess screening information should have a greater ability to perceive the potential health benefits of screening. To therefore, H1 suggests that there is a positive relationship between cervical cancer screening health literacy and perceived benefits of screening (Gemedal *et al.*, 2020).

Positive evaluations might be reinforced by a supportive person through encouragement, discussion, reassurance, and/or practical support. H2 thus posits that social support has a beneficial effect on the perceived benefits of screening. Health literacy may also directly impact behavioral readiness by improving screening information's understandability and actionability. H3 suggests that

health literacy about cervical cancer has a positive effect on cervical cancer screening intention (Jun & Lee, 2026). Screening can be facilitated through supportive relationships and there may be less practical or emotional reluctance to undergo screening. H4 thus suggests that there is a positive link between social support and screening intention (Tseng *et al.*, 2025). Informed knowledge of the benefits of screening, such as the potential for earlier detection and decision making with timely follow-up, should provide women with increased motivation to plan to screen. H5 suggests that positive perceived benefits of screening has a positive impact on screening intention. Lastly, the impact of health literacy might partially lie in a pathway of benefit recognition. Perceptions of value can be enhanced through better understanding, which in turn can further promote screening intention. Based on this, H6 suggests that perceived benefits would mediate the positive relationship between cervical cancer screening health literacy and screening intention (Jatho *et al.*, 2020).

Conceptual Framework

There are four reflective constructs in the conceptual framework. Health literacy and social support are externally supplied. Two endogenous mediating constructs are: perceived benefits and screening intention. There are five direct paths identified: HL to PB, SS to PB, HL to SI, SS to SI and PB to SI. Also indicated is the indirect pathway HL → PB → SI. Figure 1 presents the proposed relationships and corresponding hypotheses (Marques *et al.*, 2021).

Thus, the framework considers screening intention to be a result of informational capacity, social resources and benefit evaluation. It also allows for disaggregation of the indirect contribution of health literacy from its direct association with intention.

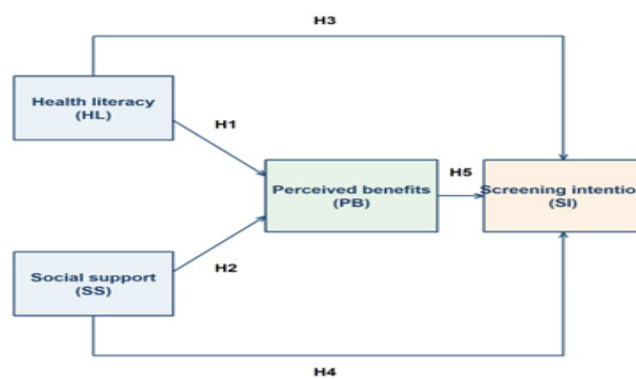


Figure 1: Conceptual framework of cervical cancer screening intention.

MATERIALS AND METHODS

Research Design and Study Population

This study was a quantitative cross-sectional survey design in which relationships between cervical cancer screening health literacy, perceived benefits, social support and screening intention were explored. The number of eligible responses to the analytical dataset was 720. Currently married women aged 30-60 yrs, residing in Bangladesh and who did not have a prior diagnosis of cancer of the

cervix were included in the study population. Eligibility questions were asked at the start of the questionnaire and the analytical sample matched the target population (Dr. Bhavanam Amarnath Reddy, *et al.*, 2023).

The study was focused on intentions regarding cervical cancer checks in situations where it seemed professionally warranted and overdue. This was done not to suggest that all respondents needed to be screened during the same period. Screening methods / timing may vary depending

on clinical guidance and individual circumstances. Thus, the intention was assessed conditionally, rather than screening being universally attributed.

Instrument and Measurement

The structured questionnaire contained participant eligibility questions, background characteristics, screening awareness and history, and four multi-item constructs. Age group, level of education, occupation, place of residence, division of residence and monthly income of the household were background factors. Screening history included past knowledge of cervical cancer screening, experience with screening, timing of last screening (among women with a history of screening), prior provider recommendation, and knowledge of sources for information on screening (Earley, 2023).

There were 5 indicators used for measuring the health literacy for cervical cancer screening. One assessed the capacity to get reliable information, another assessed the ability to understand information from a health professional, another assessing the ability to understand why screening may be recommended, a

fourth assessing the ability to determine if information is reliable or misleading, and a fifth assessing the ability to use information to determine questions to ask a health professional. Perceived benefits were assessed using four measures related to the movement of early identification, health information, receiving timely advice/follow-up, and personal importance of potential screening benefits (Chen, 2023).

Social support was assessed by five measures of husband's support, support by someone close, arranging an appointment, any practical support for travel or doing household tasks, and discussing concerns with someone trusted. Four indicators to gauge screening intention were adopted. Respondents were asked their response if a qualified health professional recommended they should be screened; if they would be screened within the next year; and if screening was appropriate and overdue. Items examined included the intention to get screened, having plans to find a place to get screened, making an appointment, and making an effort to go to a screening. Each construct indicator was measured on a 5-point Likert

Table 1: Sociodemographic characteristics of respondents

Variable	Category	Frequency	Percent
Age group	30–39	241	33.5
	40–49	216	30.0
	50–60	263	36.5
Education	No formal education	108	15.0
	Primary	107	14.9
	Secondary	114	15.8
	Higher secondary	133	18.5
	Undergraduate	140	19.4
	Postgraduate or above	118	16.4
Occupation	Homemaker	178	24.7
	Employed	178	24.7
	Self-employed	194	26.9
	Other	170	23.6
Residence	Rural	372	51.7
	Urban	348	48.3
Division	Barishal	99	13.8
	Chattogram	84	11.7
	Dhaka	88	12.2
	Khulna	89	12.4
	Mymensingh	92	12.8
	Rajshahi	87	12.1
	Rangpur	89	12.4
	Sylhet	92	12.8
Monthly household income	Below BDT 20,000	140	19.4
	BDT 20,000–39,999	141	19.6
	BDT 40,000–59,999	132	18.3
	BDT 60,000–99,999	145	20.1
	BDT 100,000 or above	162	22.5

ranging from 1=strongly disagree to 5=strongly agree.

Ethical and Participant Considerations

The participant information statement provided information about the aim of the survey and the importance of voluntary participation. Respondents were assured confidentiality and that the answers would be anonymous. They were able to leave the game, or refuse to answer a question, anytime. The questionnaire further indicated that the survey didn't tell people if they should be screened and qualified health professionals should provide guidance on screening eligibility and timing. No ethics approval was provided in the materials available for the study conducted, and no ethics approval is claimed in this manuscript.

PLS-SEM Analytical Procedure

Partial least squares structural equation modeling was used to evaluate the proposed model. The two-stage logic of measurement model assessment and structural model assessment were followed. Since all four constructs were reflective, the indicators loadings, internal consistency reliability, convergent validity and discriminant validity were the focus in measurement evaluation. Internal consistency was examined with Cronbach's alpha and composite reliability and convergent validity was examined with average variance extracted (Moura & Neves, 2025). The heterotrait-monotrait ratio was used to assess discriminant validity.

Inner variance inflation factors, coefficients of determination, effect sizes, standardized path coefficients and bootstrapped significance tests were employed to evaluate the structural model. Variances in the perceived benefits and screening intention were quantified by R² and adjusted R². Individual predictors' contribution to the endogenous constructs was interpreted based on effect sizes estimated with f² statistics. Standardized

coefficients, bootstrap standard errors, t-values, p-values and 95% confidence intervals were used to test the direct hypotheses.

The measurement assessment was seen not as numbers but as an ongoing process. Prior to interpretation of the structural paths, satisfactory indicator performance was taken into account in combination with construct reliability and convergent validity. Along with the p-values, confidence intervals were provided, thus avoiding relying only on a test statistic to determine statistical significance (Moura & Neves, 2025).

Mediation Assessment

The bootstrapped indirect effect was tested: HL → PB → SI (mediation hypothesis). The indirect effect was deemed statistically significant if the 95% CI did not include zero. The direct relationship between health literacy and the intention to screen was also left in the model to see if some of the health literacy influence was mediated through perceived benefits or if there was a direct connection from health literacy to screening intention.

RESULTS AND DISCUSSION

Sociodemographic Characteristics

As seen in Table 1, there are 720 respondents with varied analytical sample. Women aged 50–60 years formed the largest age group (36.5%), followed by those aged 30–39 years (33.5%) and 40–49 years (30.0%). Education, occupation and household income were evenly distributed across all categories listed. 51.7% of the respondents were rural and 48.3% were urban. All eight divisions were represented, and each division gave approximately one-eighth of the sample. The profile thus offers a good selection of values on the demographic and socioeconomic factors to be analyzed using the model.

Table 2: Cervical cancer screening awareness and history

Variable	Category	Frequency	Percent	Denominator
Heard of screening	Yes	537	74.6	N = 720
	No	183	25.4	N = 720
Ever screened	Yes	296	41.1	N = 720
	No	424	58.9	N = 720
Most recent screening	Within the past year	73	24.7	n = 296
	1–3 years ago	88	29.7	n = 296
	More than 3 years ago	73	24.7	n = 296
	Cannot remember	62	20.9	n = 296
Professional advice	Yes	330	45.8	N = 720
	No	304	42.2	N = 720
	Unsure	86	11.9	N = 720
Knows screening location	Yes	471	65.4	N = 720
	No	249	34.6	N = 720

Screening Awareness and History

Table 2 shows that 74.6% of the respondents were aware of the cervical cancer screening, among them, only 41.1% reported they had experienced screening. Of these 296 women screened in the past, 29.7% had had a screening 1-3 years prior and 24.7% had screened in the last year. 32.9% reported that they had been told by

their health care provider they should get screening or re-screening; 65.4% knew where to seek information on in screening. Awareness and knowledge of where to look for information was thus more prevalent than actual past experience of screening (Alam *et al.*, 2022).

Descriptive Statistics of the Constructs were presented to have a complete view of the constructs employed.

Table 3: Descriptive statistics of the study constructs

Construct	Items	N	Mean	SD	Minimum	Maximum
Health Literacy (HL)	5	720	3.124	0.786	1	5
Perceived Benefits (PB)	4	720	3.332	0.697	1	5
Social Support (SS)	5	720	3.107	0.790	1	5
Screening Intention (SI)	4	720	3.009	0.733	1	5

Descriptive Statistics of the Constructs

As observed in Table 3, perceived benefits, health literacy, and social support had the highest mean ($M = 3.332$, $M = 3.124$, $M = 3.107$, respectively). The mean for screening intention was the lowest ($M = 3.009$). The range of all constructs was full (1 to 5), and standard deviations were between 0.697 to 0.790. This trend indicates that the responders noticed the advantage of screening slightly more than they were willing to carry out the screening related action.

Measurement Model Assessment

Table 4 indicates good quality of measurement. All outer loads were above 0.70, with a minimum of 0.739 and up to 0.911. Cronbach's alpha value ranged from 0.851

to 0.914 and composite reliability value ranged from 0.851 to 0.913. The average value of variance extracted varied from 0.588 to 0.679. Therefore, the indicators of each construct were adequate in terms of indicator reliability, internal consistency, and convergent validity. The obtained results validate the use of the four reflective constructs for the structural analysis below.

The reliability was also uniform across constructs and not just attributable to one high-performing scale. The perceived benefits reliability estimates were lowest, but acceptable in terms of alpha and composite reliability and AVE value was above 0.50. Screening intention and health literacy also showed consistent indicator performance as did social support. No indicator had to be taken away because of the reported loadings (Kiran *et al.*, 2024).

Table 4: Indicator loadings, reliability, and convergent validity

Construct	Item	Outer Loading	Cronbach's α	Composite Reliability	AVE
HL	HL1	0.808	0.913	0.913	0.677
	HL2	0.801			
	HL3	0.828			
	HL4	0.800			
	HL5	0.875			
PB	PB1	0.770	0.851	0.851	0.588
	PB2	0.778			
	PB3	0.769			
	PB4	0.751			
SS	SS1	0.799	0.914	0.913	0.679
	SS2	0.828			
	SS3	0.739			
	SS4	0.911			
	SS5	0.832			
SI	SI1	0.815	0.863	0.863	0.611
	SI2	0.786			
	SI3	0.743			
	SI4	0.781			

Discriminant Validity

As per Table 5, the HTMT varies between 0.037 and 0.680. The greatest ratio was found between perceived

benefits and screening intention, and the least ratio was found between health literacy and social support. None of the values exceeded what are generally considered

Table 5: Discriminant validity based on HTMT ratio

Construct 1	Construct 2	HTMT
HL	PB	0.526
HL	SS	0.037
HL	SI	0.572
PB	SS	0.311
PB	SI	0.680
SS	SI	0.353

thresholds for problematic construct overlap. The measurement model had good discriminant validity as well, with the constructs of health literacy, perceived benefits, social support, and screening intention being related but empirically different.

Structural Model Collinearity

Table 6 shows inner VIF values from 1.000 to 1.414. Perceived benefits had both predictors with a VIF value of 1.000. The VIF values for health literacy, social support and perceived benefits were 1.307, 1.109 and

Table 6: Structural model collinearity

Outcome	Predictor	Inner VIF
PB	HL	1.000
PB	SS	1.000
SI	HL	1.307
SI	SS	1.109
SI	PB	1.414

1.414, respectively, for screening intention. These low values mean that structural collinearity did not have much meaning. Hence, the direct path coefficients can be considered without the indication of problematic overlap of the predictors (Jun & Lee, 2026).

Explanatory Power and Effect Sizes

As seen in Table 7, the variance in perceived benefits was accounted for by health literacy and social support (37.6%). The combination of health literacy, social support and perceived benefits accounted for 56.9%

Table 7: Explanatory power and effect sizes

Outcome	R ²	Adjusted R ²	Predictor	f ²
PB	0.376	0.374	HL	0.447
PB			SS	0.159
SI	0.569	0.568	HL	0.194
SI			SS	0.101
SI			PB	0.265

of the variance in intention to screen. The greatest magnitude F^2 for perceived benefits was for health literacy (0.447). The F^2 values for screening intention were largest for perceived benefits (0.265) followed by health literacy (0.194) and social support (0.101). Thus, the explanatory power of the model for screening seemed to be high.

There is a material difference between the two R² values. In the model, variance in screening intention was greater than variance in perceived benefits, suggesting that intention was not only influenced directly by perceived

benefits, but also by the direct effects of health literacy and social support (Abubakari *et al.*, 2026). The results for effect-sizes follow this pattern and indicate that each predictive variable contributed unique explanatory power.

Direct Effects and Hypothesis Testing

As can be seen in Table 8 all five direct hypotheses were supported. There was a positive association between health literacy and perceived benefits ($\beta = 0.528$, $p < .001$), and screening intention ($\beta = 0.348$, $p < .001$).

Table 8: Direct effects and hypothesis testing

Hypothesis	Path	β	Bootstrap SE	t-value	p-value	95% CI	Decision
H1	HL → PB	0.528	0.031	16.785	< .001	[0.465, 0.589]	Supported
H2	SS → PB	0.315	0.034	9.297	< .001	[0.249, 0.379]	Supported
H3	HL → SI	0.348	0.040	8.798	< .001	[0.271, 0.425]	Supported
H4	SS → SI	0.224	0.032	6.954	< .001	[0.161, 0.287]	Supported
H5	PB → SI	0.428	0.042	10.176	< .001	[0.344, 0.509]	Supported

Social support had positive effects on perceived benefits ($\beta = 0.315$, $p < .001$) and screening intention ($\beta = 0.224$, $p < .001$). The perceived benefits were also positively associated with intention to screen ($\beta = 0.428$, $p < .001$). All 95% confidence intervals were above zero, thus indicating statistically significant positive relationships for all the proposed direct paths (Villalona *et al.*, 2025).

Mediation Analysis

Table 9 shows a significant indirect effect of health literacy on screening intention through perceived benefits ($\beta = 0.226$, $t = 8.436$, $p < .001$, 95% CI [0.175, 0.280]). H6 was thus supported. The direct HL $\rightarrow$ SI path is also important, so that perceived benefits mediated part of their relationship, with the rest of the relationship being

Table 9: Indirect effect and mediation testing

H6	HL $\rightarrow$ PB $\rightarrow$ SI	0.226	0.027	8.436	< .001	[0 . 1 7 5 , 0.280]	Supported
Hypothesis	Indirect Path	Indirect β	Bootstrap SE	t-value	p-value	95% CI	Decision

independent. The results of the structural model are summarized in Figure 2 and display the path coefficients

standardized as well as the R square values for perceived benefits and screening intention.

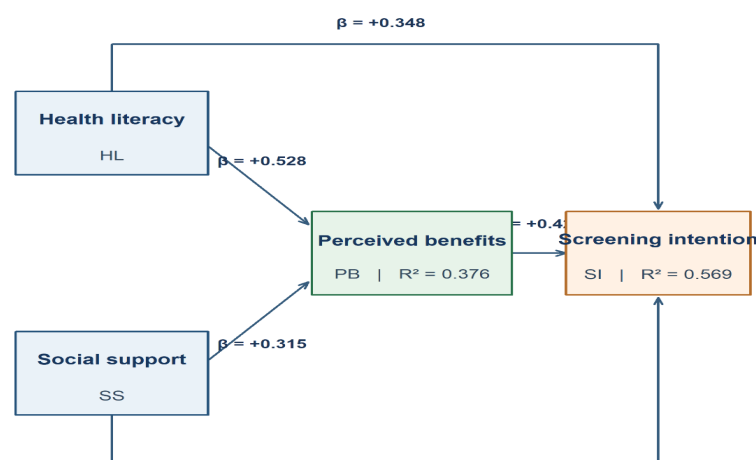


Figure 2: PLS-SEM structural model with standardized path coefficients (β) and coefficients of determination (R^2).

Discussion

The study offers empirical support for the relationships between screening intention, social support, perceived benefits, and cancer screening health literacy, as demonstrated in the study results. All direct hypotheses as well as the mediation hypothesis were confirmed. The results show that intention to screen is related to information-processing capacity, positive evaluation of screening, and interpersonal support. These factors are also interrelated in that the constructs of health literacy and social support influence perceived benefits, which, in turn, directly influence intention (Islam *et al.*, 2025).

There was a high correlation between health literacy and perceived benefits in the model. Those who were more capable to acquire, comprehend, assess and utilize screening information were significantly more likely to recognize screening value. This discovery points to the gap between access to information and the use of information for meaningful purposes. A speech may be very well received but may not increase the woman's knowledge. Screening communication should not just create a state of greater awareness but should also facilitate interpretation and evaluation, while ultimately driving practical application. Screening intention was also significantly directly

associated with health literacy. This was found to be true even with the inclusion of perceived benefits and social support. By knowing what information is credible and knowing what not to believe, women can be more likely to find professional information and services, ask questions, schedule appointments, and take action based on professional advice (Ripon *et al.*, 2026). Health literacy thus seems to function as a cognitive and practical tool for making choices.

Perceived benefits and screening intention were both significantly predicted by social support. A positive spouse or other supportive figure can help confirm the need to take preventive measures and decrease uncertainty. Practical support can also be relevant as screening can also involve travel, booking, changes in duties etc. in the household. This does not suggest that women's health choices are based on people giving them permission. It represents that helping relationships can mitigate practical interactions related to an autonomous health decision (Abubakari *et al.*, 2025).

The most direct predictor of screening intention was perceived benefits. This implies that women are more likely to develop the intention when they feel screening will detect changes that are important to them, will help them make informed choices about screening, and will give

them the opportunity to schedule a follow-up screening. This interpretation is reflected in the descriptive results as perceived benefits had the highest construct mean, while screening intention had the lowest. Positive evaluation, however, seems very important but not enough to guarantee high levels of readiness for action.

The mediation result offer a way to comprehend the role of health literacy. This emphasizes the important indirect pathway that suggests that part of the association among health literacy and screening intention is through perceived benefits. As understanding improves, so too can the benefit of screening become more apparent, and benefit recognition can grow, along with greater willingness to take action (Gemedu *et al.*, 2020). In parallel, the important direct path from HL to SI highlights that health literacy plays a role in other processes than perceived benefits, particularly in respect of information management and communication with health professionals.

The overall fit of the model was excellent, accounting for 56.9% of the variance in screening intention, for a relatively parsimonious model. Other influences also play a role, as the remaining variation shows. Future extensions may want to take into account perceived barriers, affordability, geographic access, fear, privacy concerns, healthcare trust, previous health care experiences, and other competing family needs. In general, the results provide evidence for an integrated perspective that assumes that understandable information, benefit recognition, and enabling social support function together in the process of creating screening intention.

It is worth paying attention to the awareness-history pattern as well. The majority of respondents were familiar with screening, and less than 50% had ever been screened. The availability of knowledge to where screening information would be found was also more prevalent than previous screening. While these data do not tell us why women were or were not present, they do demonstrate that exposure to screening information and prior screening receipt are distinct phenomena. The structural results provide information about the psychological and social conditions that might work in this gap (Marques *et al.*, 2021).

The pattern of the effect-size shows more information about the model. Perceived benefits also contributed most to screening intention, while health literacy contributed most to perceived benefits. This order makes sense in relation to the proposed mechanism, as understanding screening information is very much related to evaluation of screening and evaluation is very much related to readiness for action. Social support was a lesser factor, but it had a statistically significant independent effect in both endogenous equations (De Fouw *et al.*, 2023).

These results indicate that screening promotion messages and service support may best align for the most coherent promotion. Although clear information can help to reinforce understanding, benefit messages need to link that to an important reason to screen. Meanwhile, women also may need practical conditions that make intended action

feasible. Programmes that focus on just one component might then leave another leg of the decision pathway undecided. The significance of the present model is the demonstration that all these elements concurrently act, and not individually.

Theoretical Implications

The study theoretically adds value by considering health literacy in the context of cervical cancer screening as a multifaceted decision resource, not just knowledge. This good HL → PB relationship indicates that capability of obtaining, understanding, evaluating, and using information is closely related to women's assessment of preventive action. The important indirect pathway also reveals a perceived benefit as a pathway for the association between health literacy and screening intention (Harun *et al.*, 2026).

Social support is also included as a component of the model along with cognitive and evaluative aspects. Perceived benefits and screening intention were predicted by social support, indicating that preventive health decision-making takes place within an interpersonal context (Tseng *et al.*, 2025). The integrated model thus offers a more comprehensive explanation than models that only consider the dimension of knowledge or attitudes.

The scheme also explains the place of perceived benefits. It can't just be seen as another parallel predictor, but as an explanatory bridge of understanding and intention. This structure forms the foundation for future models that could include other mediators or moderators, but still maintains this distinction between informational resources, evaluative beliefs and social conditions.

Practical Implications

The results indicate that screening programmes should be more than just communication for creating awareness. Instructional aids should be developed that enable women to appreciate the reasons for screening being recommended, to know where to find reliable information, and to know what kinds of questions to ask health care providers. Benefit messages must explicitly convey early identification, timely follow-up and not promise a result.

Social support can be integrated as well without compromising women's autonomy. Effective communication with community networks, families and husbands can help facilitate positive dialogue and effective support. Support in travelling, arranging appointments or doing household tasks can decrease barriers for women to take action once they have decided on an action. A comprehensive program should thus include comprehensible information, correct benefit communication as well as enabling support (Baharum *et al.*, 2020).

The descriptive results also indicate that programmes need to differentiate between those individuals who have never heard of screening, those who have general knowledge of screening but a limited functional understanding, and those who have functional knowledge but who were

limited by practical barriers. This may mean that different communication and service responses are needed for these groups (Marques *et al.*, 2021). This segregation could help to give some focus to scarce programme resources and enhance the relevance of screening support.

Future research and limitations.

There are a number of limitations in the study. The result was the intention to attend (screening) and not actual subsequent attendance. Longitudinal studies are required to discern which factors affect the translation of intention to screening and whether intentions are actually followed by screening. However, due to the cross-sectional study design, it was not possible to draw firm temporal or causal conclusions, although the relationships observed in the study are consistent with the framework proposed.

The model focused on four constructs and did not consider other potential determinants like perceived barriers, affordability, geographic access, fear, privacy concerns, healthcare trust, self-efficacy, or previous reproductive healthcare experiences. Future research might be able to expand the model and make comparisons between the relationships in each of the demographic or service contexts. The results should be understood as for the population represented in the given data set and not assumed to represent all women in the country of Bangladesh.

Recall response or tendencies may also contribute to self-reported measures. Future research could incorporate both survey data and actual service data when possible and feasible.

CONCLUSION

The present study investigated the relationships between cancer health literacy, perceived benefit and social support for cervical cancer screening and intention to attend cervical cancer screening among married women in Bangladesh. Perceived benefits and screening intention were positively associated with health literacy. Social support also played a positive role for both constructs and perceived benefits showed a large direct relationship with intention, and significantly mediated the relationship between health literacy and intention.

This model accounted for 37.6% of the variance in the perceived benefit and 56.9% of the variance in this screening intention. The results revealed that the screening intention is a result of intertwined informational, evaluative and social processes. Screening programmes can be strengthened by developing functional screening literacy; by fully explaining the benefits of screening and making this information accurate; and by establishing more conducive conditions to participation in screening while maintaining women's independence.

REFERENCE

Abubakari, A., Gross, J., & Adusei-Poku, E. (2026). Understanding Cervical Cancer Screening Intentions Through the Lens of Care-Seeking Behavior: A

Cross-Sectional Study Among Islamic Women in Ghana. *Health Science Reports*, 9(2), e71827. <https://doi.org/10.1002/hsr2.71827>

Abubakari, A., Gross, J., Kwaku, I. D., & Boateng, I. K. (2025). Factors Influencing Cervical Cancer Screening: A Cross-Sectional Study Among Ethnically Diverse Women in the Kumasi Metropolis of Ghana. *Health Science Reports*, 8(2), e70433. <https://doi.org/10.1002/hsr2.70433>

Alam, Z., Ann Dean, J., & Janda, M. (2022). Cervical screening uptake: A cross-sectional study of self-reported screening attitudes, behaviours and barriers to participation among South Asian immigrant women living in Australia. *Women's Health*, 18, 17455057221096240. <https://doi.org/10.1177/17455057221096240>

Baharum, N. N., Ariffin, F., Isa, M. R., & Tin, S. T. (2020). Health Literacy, Knowledge on Cervical Cancer and Pap Smear and Its Influence on Pre-Marital Malay Muslim Women Attitude towards Pap Smear. *Asian Pacific Journal of Cancer Prevention*, 21(7), 2021–2028. <https://doi.org/10.31557/APJCP.2020.21.7.2021>

Bando, E. F., Mohamed Saifulaman Mohamed Said, Tukimin Bin Sansuwito, & Jipri Suyanto. (2025). A Systematic Literature Review: The Effect of Health Education Concepts of Cervical Cancer in Community Based. *Public Health of Indonesia*, 11(2), 81–90. <https://doi.org/10.36685/phi.v11i2.957>

Bawuah, A., Wang, V. Q., Adeleye, K., Ameyaw, E. K., & Yaya, S. (2025). Mass Media Exposure and Cervical Cancer Screening in Rural Sub-Saharan Africa: A Multi-Country Cross-Sectional Analysis. *Health Science Reports*, 8(4), e70663. <https://doi.org/10.1002/hsr2.70663>

Chen, Y. (2023). Methodology. In Y. Chen, Surface Plasmon Resonance Imaging (Vol. 95, pp. 91–164). *Springer Nature Singapore*. https://doi.org/10.1007/978-981-99-3118-7_4

De Fouw, M., Stroeken, Y., Niwagaba, B., Musheshe, M., Tusiime, J., Sadayo, I., Reis, R., Peters, A. A. W., & Beltman, J. J. (2023). Involving men in cervical cancer prevention; a qualitative enquiry into male perspectives on screening and HPV vaccination in Mid-Western Uganda. *PLOS ONE*, 18(1), e0280052. <https://doi.org/10.1371/journal.pone.0280052>

Dr. Bhavanam Amarnath Reddy, Dr. Aayesha Sagir Khan, Dr. Mohammed Wamique Hisam, & Dr. Somnath Arote. (2023). *Research Methodology*. <https://doi.org/10.5281/ZENODO.8177256>

Earley, E. J. (2023). *Methodology*. <https://doi.org/10.17605/OSF.IO/FN4J2>

Garcia Iurgain, J. (2025). *An ecological exploration of the barriers and facilitators to cervical cancer screening and HPV self-sampling acceptability amongst Moroccan and Pakistani women in Spain* [London School of Hygiene & Tropical Medicine]. <https://doi.org/10.17037/PUBS.04675279>

Gemeda, E. Y., Kare, B. B., Negera, D. G., Bona, L. G.,

- Derese, B. D., Akale, N. B., Kebede, K. M., Koboto, D. D., & Tekle, A. G. (2020). Prevalence and Predictor of Cervical Cancer Screening Service Uptake Among Women Aged 25 Years and Above in Sidama Zone, Southern Ethiopia, Using Health Belief Model. *Cancer Control*, 27(1), 1073274820954460. <https://doi.org/10.1177/1073274820954460>
- Harsch, S., Weber, L. S., Kassaman, D., Kailemia, P. N., & Oria, V. O. (2025). Cancer health literacy in Kenya—A scoping review on evidence, concept and a situational analysis of interventions. *Frontiers in Public Health*, 13, 1527400. <https://doi.org/10.3389/fpubh.2025.1527400>
- Harun, S. N. F., Azlan, A. A., Mohd Hassan, N. Z. A., & Mohamad, E. M. W. (2026). Health belief model and cervical cancer screening intention among lower socioeconomic women in Malaysia: A pilot study. *Frontiers in Public Health*, 14, 1843558. <https://doi.org/10.3389/fpubh.2026.1843558>
- Hernandez, S., Ahuja, A., Kakkad, N., Nignang, C. T., Cote, M., Schoenberger, M., Sison, R., Munkaila, A., Anemana, G., Baatiema, L., Hollond, C., Malechi, H., Brault, M. A., Moucheraud, C., & Simono Charadan, A. M. (2026). "My Wife's Healthcare Is my Healthcare": A Qualitative Study Exploring Family-Centered Strategies to Enhance Cervical Cancer Prevention in Northern Ghana. *Cancer Control*, 33, 10732748261448259. <https://doi.org/10.1177/10732748261448259>
- Islam, T., Khan, Md. A. S., Hawlader, M. D. H., Meem, N.-E.-S., Eva, F. N., Monisha, U. K., Hossain, M. A., & Nabi, M. H. (2025). Awareness about cervical cancer and its socio-economic determinants among adults in Bangladesh: Results from a nationwide cross-sectional study. *PLOS One*, 20(6), e0325712. <https://doi.org/10.1371/journal.pone.0325712>
- Jatho, A., Everd Bikaitwoha, M., & Mugume Mugisha, N. (2020). Socio-culturally mediated factors and lower level of education are the main influencers of functional cervical cancer literacy among women in Mayuge, Eastern Uganda. *Ecancermedicalscience*, 14. <https://doi.org/10.3332/ecancer.2020.1004>
- Jun, J. S., & Lee, K. H. (2026). Protective and Risk Factors and Gastric Cancer Knowledge Among Korean Immigrant Adults in Midlife and Older in the U.S. *Journal of Evidence-Based Social Work*, 23(5), 828–844. <https://doi.org/10.1080/26408066.2025.2565247>
- Khalednejad, M., Salehi, L., Pashang, S., Moghimbeigi, A., & Nameghi, A. N. M. (2023). Perspectives of Married Women Related to Cervical Cancer Screening Test: A Theory-Based Qualitative Study in Iran. *Current Women's Health Reviews*, 19(1), e040322201708. <https://doi.org/10.2174/1573404818666220304104128>
- Kıran, Ş., Sevim, F., Ürek, D., & Şenol, O. (2024). Factors affecting cancer screening perception in Turkish women: The role of health literacy. *Health Promotion International*, 39(3), daae053. <https://doi.org/10.1093/heapro/daae053>
- Marques, P., Gama, A., Santos, M., Heleno, B., Vermandere, H., & Dias, S. (2021). Understanding Cervical Cancer Screening Barriers among Migrant Women: A Qualitative Study with Healthcare and Community Workers in Portugal. *International Journal of Environmental Research and Public Health*, 18(14), 7248. <https://doi.org/10.3390/ijerph18147248>
- Moura, M., & Neves, R. (2025). Methodology. In M. Moura & R. Neves, Using Fundamental Analysis and an Ensemble of Classifier Models Along with a Risk-Off Filter to Select Outperforming Companies (pp. 27–52). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-62061-4_3
- Ozturk, N. Y., Hossain, S. Z., Mackey, M., Adam, S., & Brennan, P. (2024). HPV and Cervical Cancer Awareness and Screening Practices among Migrant Women: A Narrative Review. *Healthcare*, 12(7), 709. <https://doi.org/10.3390/healthcare12070709>
- Ripon, R. K., Hossain, M. J., Prasad, N. G., Thakkar, N., Ottoho, E., Gokhale, S., Munot, S., Volquez, M., Manghani, P., Paulino-Ramírez, R., Cruz, M., Saunik, S., Majumdar, P., & Meda-Monzon, E. (2026). Cervical Cancer, HPV, and HPV Vaccine Knowledge and Willingness to be Vaccinated Among Adolescent Girls in Dhaka, Bangladesh: A Cross-Sectional Study. *Health Science Reports*, 9(2), e71843. <https://doi.org/10.1002/hsr2.71843>
- Tseng, K. W., Mohabbat, H., Adachi, A., Calaguas, A., Kaur, A., Salem, N., & Goliaei, Z. (2025). Reproductive Health Literacy and Knowledge Among Female Refugees: A Scoping Review of Measurement Methodologies and Effect on Health Behavior. *International Journal of Environmental Research and Public Health*, 22(7), 1121. <https://doi.org/10.3390/ijerph22071121>
- Uddin, J. (2026). Cultural Norms and Maternal Health Behavior: Social Influences on Cesarean Section Intentions in Bangladesh. *Howard Journal of Communications*, 1–20. <https://doi.org/10.1080/10646175.2026.2725649>
- Villalona, S., Sanchez, J., Mangkalar, P., & Best, A. L. (2025). Understanding Disclosure Decisions and Communication About HPV-Related Cancer: A Qualitative Exploration of Stigma and Social Support. *Healthcare*, 13(9), 966. <https://doi.org/10.3390/healthcare13090966>
- Zhang, M., Sit, J. W. H., Chan, D. N. S., Akingbade, O., & Chan, C. W. H. (2022). Educational Interventions to Promote Cervical Cancer Screening among Rural Populations: A Systematic Review. *International Journal of Environmental Research and Public Health*, 19(11), 6874. <https://doi.org/10.3390/ijerph19116874>