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Original Article

Associated factors of cervical cancer screening intention among reproductive-aged women: A cross-sectional study

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ABSTRACT

Introduction: Cervical cancer screening has consistently proven effective in reducing both the incidence and mortality of cervical cancer. However, in many developing countries, including Indonesia, participation in screening programs remains considerably low. The primary objective of this study was to examine the intention toward cervical cancer screening and the associated factors among reproductive-aged women in Malang city, East Java, Indonesia.

Methods: This study employed an observational analytic approach with a cross-sectional design. Researchers conducted the study with 410 participants selected through a simple random sampling technique in Malang. The study focused on cervical cancer screening intention as the dependent variable, while considering attitude, affordability of health services, and health worker support as independent variables. The data collection instrument utilized was a questionnaire comprising various aspects such as attitude, affordability of healthcare services, and health worker support. The researcher-designed questionnaire was guided by the PRECEDE-PROCEED Model. The data were analyzed through multiple linear regression.

Results: The results revealed that favorable attitudes (B = .08, SE = .04, *P*-value = .026), affordable healthcare services (B = 1.06, SE = .19, *P*-value = < .001), and support from healthcare workers (B = .59, SE = .24, *P*-value = .013) were associated with an increased intention toward undergoing cervical cancer screening.

Conclusion: This study highlights that favorable attitudes, affordable access to healthcare services, and adequate support from health workers are significantly associated with the intention to undergo cervical cancer screening among reproductive-aged women.

Keywords: attitude; cervical cancer screening; health worker support; healthcare services; reproductive-aged women

INTRODUCTION

Cervical cancer remains one of the leading causes of cancer-related deaths in Indonesian women. Based on the Global Cancer Observatory statistics, at least 36,633 new cervical cancer cases were reported in Indonesia, with an imperative requirement for effective prevention strategies (Tjokroprawiro et al., 2024). Although cervical cancer is highly preventable by precancerous lesions being treated and detected early through screening, Indonesian women's participation in screening programs is still extremely low (Robbers et al., 2021).

Cervical cancer is caused by abnormal cells in the cervix tissue, and Human Papilloma Virus (HPV) infection contributes significantly to its causation (Sravani et al., 2023). Sexual activity and smoking are also risk factors for cervical cancer (Mekonnen & Mittiku, 2023). Nearly all cervical cancer cases are linked with HPV, where 70% of the cases in the world are caused by types 16 and 18 (Bobadilla et al., 2023; Chan et al., 2019; Yamaguchi et al., 2021; Zhang et al., 2020). As early cervical cancer does not typically present with symptoms, there is a necessity of having routine cervical screening to detect any cell abnormalities in time (Jallah et al., 2023; Gupta et. al., 2023). Moreover, even with prior cervical screening or HPV vaccination, it is essential to take immediate medical care if such symptoms develop (Chi Lim et al., 2022). Cervical cancer is preventable through vaccination or screening for cervical cancer (Mullapally et al.,2023).

Second, HPV vaccination has the purpose of preventing infection by HPV, where the vaccine is typically administered to children before puberty and before the commencement of sexual activity, often at 12-13 years of age (Diakite et al., 2023; Yusupov et al., 2019). Cervical screening, on the other hand, has the purpose of screening for cervical cell early changes so that intervention can be obtained in order to prevent cancer (Mustafa et al. 2023). Previous studies indicated high correlations between cervical cancer screening and age (Tiruneh et. al., 2017), insurance status (Ba et al., 2021), wealth index (Tiruneh et al., 2017), residence (Tiruneh et al., 2017), education (Morris, 2016), woman's autonomy to make decisions (Nguyen et al., 2014), access to a health facility (Ferlay et al., 2015), residence (Ba et al., 2021), use of mass media (Kangmennaang et al., 2015), surviving children (Ba et al., 2021), and visits to a health facility in the past year (Ba et al., 2021). Recurrent screening procedures for cervical screening include Pap smear and/or testing for HPV (Widayanti et al., 2020). In Indonesia, the programmes introduced by the Ministry of Health are Visual Inspection

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with Acetic Acid (VIA), Pap smear, and HPV DNA testing in recent times (Ekawati et al., 2024).

Malang City has also been zealous, including the organization of HPV vaccination campaigns and community education (Mauludiyah et al., 2025). This notwithstanding, cervical cancer screening service utilization remains low, with the majority of women presenting for care when the disease is in the advanced stages, typically precipitated by delay in detection (Sumarmi et al.,2021).

In an effort to eradicate cervical cancer cases in Malang City, the Health Office remains committed and actively conducts prevention socialization through HPV vaccination. Since 2021, Malang City has become a pilot project for a free HPV vaccination program by successfully reaching more than 500 participants aged 9-11 years in elementary schools. The age choice refers to the national guidelines and programs from the Ministry of Health wherein the current HPV vaccination target is focused on 9 to 13 years old, in the hope of providing effective early protection. Various efforts to prevent cervical cancer in Malang have been carried out, but cases of cervical cancer still remain. Programs that target the improvement of women's screening practices are essential. Information about the risk factors as well as the screening behavior of the study subjects is essential to provide targeted interventions. However, information on attitudes toward cervical cancer screening is limited in the country; especially in the study area. Thus, the findings of this study will provide the information needed to fill this gap, especially for the strengthening of primary care systems to address this growing public health problem. By filling these gaps, the aim of this study was to examine the intention toward cervical cancer screening and the associated factors among reproductive-aged women. Despite widespread preventive efforts in various countries, the mortality rate from cervical cancer has remained a persistent issue over the past three decades.

This study is urgent because limited research has explored the psychosocial and structural factors affecting screening intention in Indonesia. While prior studies have examined demographic and socioeconomic factors such as education, income, and health insurance status (Aoki et al., 2020; Ekawati et al., 2024; Sirait et al., 2022), fewer have focused on psychological (e.g., attitude), systemic (e.g., affordability), and interpersonal (e.g., health worker support) dimensions that are critical for understanding screening behaviors.

The variables chosen in this study, such as intention to undergo cervical cancer screening, attitude, affordability of health services, and health worker support are based on the PRECEDE-PROCEED model, which emphasizes predisposing, enabling, and reinforcing factors that influence health behavior (Kim et al., 2022). Intention is a well-documented predictor of actual behavior, particularly in health-related decision-making (Kim et al., 2022). Attitude reflects personal beliefs and perceptions toward screening, affordability assesses economic accessibility (Solmaz & Kıssal, 2025), and health worker support captures the interpersonal encouragement and facilitation provided by the healthcare system (Johnson et al., 2022).

A clear research gap exists in the Indonesian context, especially in mid-sized urban areas like Malang. Most previous studies were conducted in larger cities or rural regions and often focused only on awareness or knowledge levels (Permatasari & Putri, 2021; Winata et al., 2023). Few studies have integrated the behavioral intention framework while analyzing the influence of economic and health system support factors. Therefore, this study aims to fill these gaps by providing evidence on the determinants of cervical cancer screening intention among reproductive-aged women in Malang City. The findings are expected to inform more tailored, community-specific interventions and enhance the effectiveness of ongoing cervical cancer prevention programs in Indonesia.

METHODS

Study Design

This study employed an observational analytic approach with a cross-sectional design. This design was chosen because it allows for the examination of relationships between variables of interest, such as attitudes, affordability of health services, health worker support, and cervical cancer screening intentions, at a single point in time. The cross-sectional design is appropriate for this research as it enables efficient data collection from a relatively large sample within a limited period, facilitating the identification of potential associations and factors influencing cervical cancer screening behaviors (Wang & Cheng, 2020). This approach is commonly used in public health research to provide a snapshot of health behaviors and related determinants, which can inform the development of targeted interventions.

Samples and Sampling

The study utilized a simple random sampling technique without stratification considerations. The study population encompassed the entire community surrounding Malang City, while the sample was selected through simple random sampling. Furthermore, researchers determined the sample size using the Lemeshow formula due to the unknown population size.

In the equation, n represents the sample size, z denotes the standard value (1.96 at a 5% level of significance), p signifies the maximum estimate (50% or .5), and d represents the alpha (.05) or sampling error (5%). The calculations determined that the minimum required sample size was 384. However, this study exceeded expectations, with 410 individuals completing the questionnaires distributed via Google Forms. The inclusion criteria were women of reproductive age (15–49 years), who were willing to participate and completed the online questionnaire during the data collection period. Although the reproductive age range begins at 15, cervical cancer screening methods such as Pap smear and VIA are primarily recommended for sexually active women. Therefore, the questionnaire included items to identify the respondents' marital status and sexual activity history. These items helped ensure the relevance of their responses regarding cervical cancer screening behavior. Respondents who were under 15 or over 49 years of age, or those who did not meet the inclusion criteria, were excluded from the study. This approach aligns with the aim of understanding intention and associated factors for cervical cancer screening among women who are most likely eligible for such screening based on their sexual and reproductive health profiles. Only women aged 15 to 49 years who were married or had ever engaged in sexual intercourse were included in this study, as they are the target population for cervical cancer screening programs. Women who did not meet these criteria were excluded from the analysis.

Instruments

The study encompassed independent variables including attitude, affordability of healthcare services, and support from healthcare workers, while the dependent variable focused on the inclination to undergo cervical cancer screening. The data collection instrument utilized was a questionnaire comprising various aspects such as attitude, affordability of healthcare services, and health worker support, informed by relevant literature reviews.

The questionnaire, guided by the researcher using the PRECEDE-PROCEED model, was designed based on the recommendations identified through the literature review. It consisted of four sections: demographic information, predisposing factors such as attitudes toward cervical cancer screening; enabling factors such as accessibility of healthcare and proximity to public health facilities; and reinforcement factors regarding support by the health workers. Compared to other models such as the theory of planned behavior or the health belief model, PRECEDE-PROCEED is advantaged in the sense that it addresses a wide range of levels of determinants, from individual levels up to environment and policy levels (Huang et al., 2020). Consequently, the model is often applied in community-based health promotion intervention planning and evaluation, indeed particularly in the prevention of diseases such as cervical cancer (El Rahman et al., 2021). Additionally, selection of the model is also informed by the model's ability to inform primary data collection and the development of more contextual and relevant interventions within the field. Moreover, attitude was quantified by researchers using a 5-point Likert scale ranging from strongly agree to strongly disagree, and questions regarding support from the health worker were rated dichotomously as Yes or No.

The variable attitude towards cervical cancer screening was measured by a total of 15 statements scored on a 5-point Likert scale ranging from strongly disagree (score 1) to strongly agree (score 5). Higher scores indicate a good attitude towards cervical cancer screening. The measure for affordability of health services was established by three items that assessed the distance of respondents' residences to health facilities as close (<1 km), intermediate (1–3 km), and far (>3 km). This measure reflects the accessibility of healthcare services. The support from health workers variable comprised two dichotomous items (yes = 1, no = 0), which asked whether health professionals provided information and explanations about screening, offered positive feedback, assisted in accessing information, and paid attention to patient complaints. Finally, the intention to undergo cervical cancer screening was measured with 13 statements, also rated on a 5-point Likert scale from strongly disagree (score 1) to strongly agree (score 5). Higher scores indicate stronger intention to participate in cervical cancer screening. To ensure the instruments' validity, content validity was assessed by a panel of three experts in public health and cancer screening, who evaluated the relevance, clarity, and appropriateness of each item. Based on their feedback, minor revisions were made to improve the questionnaires. Reliability testing was performed using a pilot study with 30 respondents from a similar population, and internal consistency was measured by Cronbach's alpha. The reliability coefficients for the attitude, affordable healthcare services, health worker support, and screening intention scales were .91, .75, .73, and .78, respectively, indicating good reliability of the instruments. These steps ensured that the data collected were both valid and reliable for subsequent analysis.

Data Collection

Data collection was conducted from January to March 2024 in Malang City, East Java. The questionnaire was completed via the WhatsApp messaging application, and this was hosted on a Google Form. Recruitment for participants was aided by 40 trained community volunteers, locally known as cadres, who were selected on the basis of preselected criteria. These conditions were to be permanent residents of various neighborhoods of Malang City, being experienced in community health activities previously, and being capable of communicating with the target groups. The cadres received uniform training on the objectives of the study, ethics, and questionnaire distribution procedures in order to ensure uniformity and accuracy of data collection. Their primary tasks were to assist the research team in identifying potentially eligible respondents based on inclusion criteria, explaining the study purpose, obtaining informed consent, and distributing and collecting the questionnaires. The utilization of these cadres facilitated access to different community members and representative sampling from diverse geographic and socio-demographic subgroups in Malang. The questionnaire was distributed via the WhatsApp messaging platform using a Google Form link. Volunteers were given the questionnaire link and asked to share it with eligible women in their communities who met the inclusion criteria. Prior to being able to proceed to access the questionnaire, participants were shown an introduction page indicating the purpose of the study, that they voluntarily participated, confidentiality promises, and contact information for the research team. This was then followed by a computer-informed consent statement, and only participants who clicked "*I agree to participate*" were permitted to proceed and complete the questionnaire. Collection of data was carried out in several sub-districts of Malang, including Klojen, Lowokwaru, Blimbing, Kedungkandang, and Sukun. These sub-districts were selected in a way as to cover a diverse range of socioeconomic and demographic statuses to be able to assess the factors associated with intention for cervical cancer screening more precisely.

Data Analysis

The first task was to examine the data gathered for determining their relevance to later analysis. In doing so, attention was paid to the completeness of the replies in questionnaires, the readability of writing, and the relevance of replies given. The researchers then moved to numerically classify the response by assigning a particular code or sign to every reply since the questionnaire consisted of positive and negative statements. These were then added up to get a total score to facilitate further analysis using the SPSS package. Once coded, the data were inputted into a computer program table and underwent data cleaning procedures, during which unwanted entries were removed to fit the purpose of the study. The finalized dataset was then sorted according to the predefined variables and displayed in a tabular format for ease of management in following data processing procedures.

Descriptive statistics like frequency distributions were used to present the demographic description of the participants. Pearson's correlation coefficient was used in the examination of association between primary variables to establish linear relationships between attitude, affordability of health services, and health worker support. Multiple linear regression analysis was subsequently conducted to establish the variables significantly associated with the intention to receive screening

for cervical cancer. The b regression coefficients indicated the strength and direction of such correlations, with positive for direct correlation and negative for inverse correlation. Statistical significance was at .05. All the analyses were done using SPSS software to obtain accurate and reliable results.

Ethical Clearance

This study obtained ethical approval from the Research Ethics Commission of the Faculty of Medicine, Universitas Islam Al-Azhar Mataram, under the reference number 010/EC - 04/FK-06/UNIZAR/I/2024.

RESULTS

A total of 410 reproductive women from five sub-districts in Malang City participated as respondents. Data collection was carried out across several sub-districts in Malang, including Klojen, Lowokwaru, Blimbing, Kedungkandang, and Sukun. Sukun Sub-district had the highest number of respondents, namely 108 people (28.7%), followed by Blimbing Sub-district with 93 respondents (24.7%) and Lowokwaru with 81 respondents (22.3%). Meanwhile, Kedungkandang recorded 72 respondents (19.1%) and Klojen had a total of 56 respondents (14.9%) who participated in the study. The distribution of these respondents reflects variations in population distribution and differences in accessibility to health services in each sub-district (Figure 1).

A total of 410 respondents participated in this study, resulting in a response rate of 100%. The majority of respondents were aged 25-49 (87.6%), had attained a university degree (34.4%), were married (59.0%), and had 2-3 children (49.5%). Additionally, most respondents were employed in the private sector (45.4%), and 238 respondents (58.0%) reported a monthly family income ranging from 1-3 million IDR. The majority of respondents (213 people, 52.0%) involved in this study started marriage at the age of over 30 years. Respondents who got married at the age of 20–30 years amounted to 152 people (37.1%), while those who got married at the age of 15–20 years were only 45 people (10.9%). This shows that most respondents postpone the age of marriage until late adulthood. Meanwhile, related to the age of first sexual activity, most respondents reported starting it at the age of 30–39 years, which was 138 people (33.7%), followed by the age group of 20–29 years old as many as 107 people (26.0%). Respondents who started sexual activity at the age of 40–49 years were recorded as many as 106 people (25.9%), and at the age of 15–19 years as many as 59 people (14.4%). This is important in considering the clinical feasibility of cervical cancer screening such as Pap smears or VIAs, which are generally intended for women who have been sexually active (Table 1).

The mean attitude of the age among reproductive women was 28.9 (range for lowest-highest was 16-56 years old). The average for affordability of health services score was 2.5 (range for lowest-highest was 1-5). The mean of health worker support was 7.1 (range for lowest-highest was 5-8) and cervical cancer screening was 30.4 (range for lowest-highest was 16-45) (Table 2). The respondents' attitudes toward cervical cancer screening were measured using 15 statements rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Thus, the total possible score for this variable ranged from 15 to 75. To categorize the levels of attitude, Bloom's cut-off points were applied, dividing the scores into three categories: good, moderate, and poor. A score between 60 and 75 (equivalent to 80–100% of the maximum score) was classified as a good attitude, a score between 45 and 59 (60–79%) was considered moderate, and a score below 45 (less than 60%) was classified as poor. This classification approach was adopted to provide a systematic and clear interpretation of respondents' attitudes, facilitating meaningful analysis. The use of a 5-point Likert scale allowed for adequate variation in responses, capturing the nuances of individual attitudes toward cervical cancer screening. The cut-off points affordability of health services were: far (<3km), middle (1-3km), and near (>3km). The cut-off points of health worker support were: good: 6-8, moderate 5, and poor under 5. The cut-off points of cervical cancer screening were: 48-60, moderate 36-47, and poor under 47.

Before proceeding with multivariate analysis, a bivariate analysis using Pearson correlation was conducted to assess the linear relationship between each independent variable such as attitude, affordability of health services, health worker support, and the dependent variable, namely the

Table 1. Demographic characteristics of the research participants

Demographic	n	%
Age (years)		
15-24	51	12.4
25-49	359	87.6
Education		
Primary School	41	10.0
Secondary Education	118	28.8
Diploma	85	207
University Degree	141	34.4
Post-graduate Degree	25	6.1
Employment		
Unemployed	54	13.2
Government Sector	62	15.1
Private Sector	186	45.4
Self-employed	108	26.3
Marital Status		
Married	242	59.0
Not married	160	39.0
Divorce/ Windowed	8	2.0
Age of Marriages		
15-20	45	10.9
20-30	152	37.1
>30	213	52.0
Age of Initiation Sexual Activity		
15-19	59	14.4
20-29	107	26.0
30-39	138	33.7
40-49	106	25.9
Monthly Family Income (in IDR)		
<1 million	104	25.4
1-3 million	238	58.0
>3 million	68	16.6
Number of Children		
0–1 child	146	35.6
2-3 children	203	495
>4 children	61	14.9

Table 2. Frequency Distribution of Variable Dimensions Among Women Participating in the Study

Variables	Number of Questions	Mean ± SD	Median	Lowest - Highest
Attitude	15	28.9±5.8	29	16-56
Affordability of Health Services	3	2.5±1.2	2	1-5
Health Worker Support	4	7.1±0.9	7	5-8
Cervical Cancer Screening	12	30.4±4.4	30	16-45

Table 3. Correlation Analysis

Variables	Attitude	Affordability of health services	Health worker support	Screening intention
Attitude	1	.22**	-.01	.16**
Affordability of Health Services	.22**	1	-.11*	.28**
Health Worker Support	-.03	-.11*	1	.09

Note: * = Correlation is significant at .05 (2 tailed); **= Correlation is significant at .01 (2 tailed)

Table 4. Multiple Linear Regression Results

Variables	Unstandardized (b)	SE	Standardized (β)	CI 95%		t	*P*-value
				Lower	Upper		
Attitude	.08	.04	.11	.10	.16	2.24	.026
Affordability of Health Services	1.06	.19	.27	.69	1.43	5.65	< .001
Health Worker Support	.59	.24	.24	.13	1.05	2.51	.013

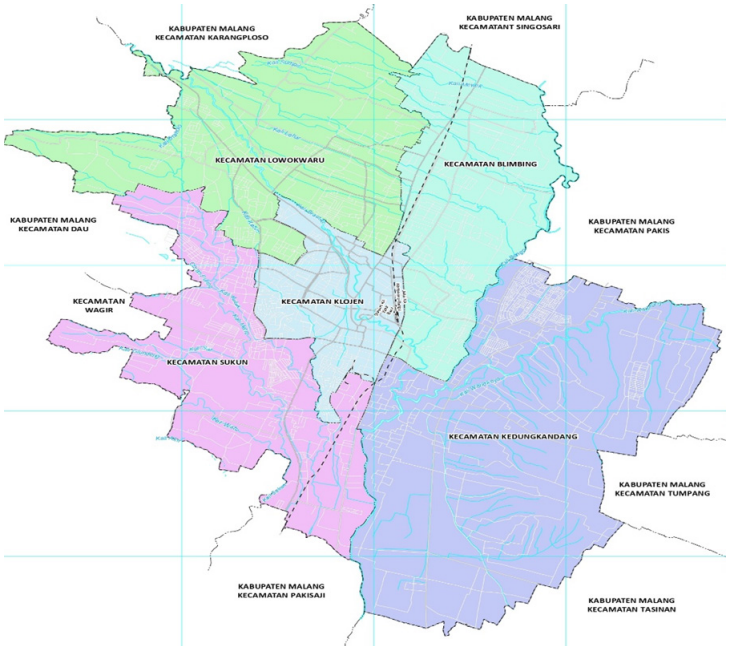

Figure 1. Respondent Distribution Map

intention to undergo cervical cancer screening. This step was essential to identify significant associations and ensure that only relevant predictors were included in the subsequent multiple linear regression model. The bivariate analysis also served to screen variables for multicollinearity and to confirm the appropriateness of model inclusion, thereby enhancing the robustness and interpretability of the final multivariate findings. Correlation serves as a statistical measure to assess the relationship between two variables. A monotonic relationship indicates that as one variable increases, the other variable consistently either increases or decreases. In correlated data, variation in one variable's magnitude corresponds to changes in another variable, either in the same or in opposite direction. Essentially, higher values of one variable are associated with either higher (positive correlation) or lower (negative correlation) values of the other. This study examined the correlation between elements of the PRECEDE PROCEED model and women's willingness to undergo cervical cancer screening using Pearson correlation analysis. The findings revealed a positive correlation between various components of the PRECEDE PROCEED model and intention for undergo screening. Table 3 depicts the correlation between the PRECEDE PROCEED model and screening intention.

The multiple linear regression analysis identified three significant predictors of cervical cancer screening intention. These included attitude (β = .11, *P*-value = .026), affordability of health services (β = .27, *P*-value < .001), and health worker support (β = .24, *P*-value = .013). Among these, affordability of health services emerged as the strongest predictor. This indicates that more positive attitudes, better affordability, and greater support from health workers are associated with higher intention to undergo screening (Table 4).

DISCUSSION

The main findings of this study revealed that the intention to undergo cervical cancer screening among women of reproductive age is significantly influenced by attitude, affordability of health services, and support from health workers. Demographically, most respondents were within the 25-49 age range, a group identified by the World Health Organization as critical for reproductive health interventions. The positive association between attitude and screening intention aligns with the PRECEDE-PROCEED model, which suggests that favorable evaluations of a behavior increase the likelihood of intention and action. Affordability, encompassing cost, distance, and time, emerged as the strongest predictor, highlighting the practical barriers faced by women in accessing screening services. Additionally, support from health workers plays a crucial role by providing education and motivation, reinforcing positive health behaviors. Together, these variables interact to shape women's willingness to participate in cervical cancer screening programs, underscoring the need for integrated interventions addressing both psychosocial and structural factors.

Most respondents who demonstrated a positive attitude toward cervical cancer prevention behavior are inclined to adopt positive practices for cervical cancer prevention. Nevertheless, this study noted instances where certain respondents exhibited a negative attitude yet engaged in positive cervical cancer prevention behaviors. The data presented above indicate that attitudes toward cervical cancer prevention behavior have a significant association with the actual adoption of preventive measures. The findings of this study regarding the association between attitudes toward cervical cancer prevention behavior and the actual behavior indicate a strong correlation between the two variables. This result in a line with the research conducted by Winata et al. (2023) which suggests a positive relationship between attitude and cervical cancer prevention behavior, where individuals with a positive attitude tend to exhibit good behaviors.

Attitude toward behavior denotes an evaluation of the degree to which an individual perceives advantages and disadvantages associated with the behavior (Fishman et al., 2021). This evaluation leads individuals to form either positive or negative judgment about an object. Moreover, attitudes play a significant role in influencing careful and rational decision-making process (Büdenbender et al., 2023). They serve as predisposing factors to behavioral actions, reflecting an individual's readiness to respond to objects within their environment. Furthermore, the more positively an individual perceives the potential outcomes of a behavior, the more likely they are to exhibit a positive attitude toward it (Brügger & Höchli, 2019). Conversely, negative perceptions of potential outcomes are associated with negative attitudes toward the behavior (Yuan et al., 2023).

Attitudes toward activities represent subjective feelings experience before and during the engagement in actions, whether they evoke positivity, negativity, amusement, intrigue, pleasure, or disfavor (Chen et al., 2022). These attitudes play a crucial role in determining whether an individual will persist with or cease the behavior. Behaviors yielding positive outcomes are often repeated, while those associated with negative consequences are usually avoided. Consequently, while a positive attitude typically leads to a favorable behavior, the absence of an accompanying intention to act upon the belief may hinder the realization of anticipated actions (Rejeski & Fanning, 2019).

The attitude determined by an individual is highly subjective and is also influenced by the intention or commitment to act in accordance with existing beliefs (Fishman et al., 2021). Therefore, behaviors that yield positive impacts are likely to persist, whereas those with negative impacts are typically discontinued and avoided. In this study, attitudes associated with cervical cancer prevention behaviors among the majority of respondents were influenced by emotions arising from preventive measures, such as fear and embarrassment about undergoing cervical cancer screening. This emotional response may be influenced by inadequate information received regarding cervical cancer prevention behaviors (Zahra et al., 2024).

Based on the conducted research, a majority of respondents reside at a moderate distance from home to the health center. The proximity of healthcare facilities offering affordable cervical cancer screening services for women of reproductive age is expected to enhance their screening behavior. This is because distance may impede the ability and willingness women of reproductive age to access services, especially in cases where transportation options are limited (Treacy et al., 2018). Furthermore, the affordability of the distance to a healthcare center serves as an indicator of respondents' access to healthcare services. This affordability is assessed based on three factors: cost, time, and distance to healthcare facilities.

Cervical cancer screening services in Malang city are predominantly provided through public health centers, community clinics, and selected hospitals having screening facilities (Ana et al., 2021). These are the first points of entry for women receiving preventive health services, including Pap smears and VIA tests. Their availability is interconnected by various factors, specifically distance to the health facilities, travel time, and the cost. Existing studies and past local health reports have cited distance among primary barriers for women to access cervical cancer screening because the farther the distances traveled, the greater the cost and time to access care, thereby reducing the likelihood of women to register in screening programs (Robbers et al., 2021). Therefore, affordability was quantified in this research by considering cost, time, and distance to facilities to provide a comprehensive measure of accessibility to cervical cancer screening services that is well-suited to the local context.

The role of health workers entails providing support to individuals, especially with regards to matters of the participant state of health. Further, support from health workers is determinative in the determination of the reaction of an individual to recommended health behaviors (Panahi et al., 2022). Health workers possess the ability to model individual behavior through demonstrating interest in specific actions and reinforcing individuals who actively engage in involvement in health programs (Martínez et al., 2021). Furthermore, support from trained healthcare professionals is scored as one of the significant determinants because social support is more effective when provided by people who have a great deal of control over someone's life.

Healthcare providers in Malang city provide a number of services to women concerning cervical cancer screening, including health education and counseling about the necessity of screening. A few of the respondents, however, expressed a desire for more individualized and culturally sensitive information and for more female healthcare providers to be available. This indicates a mismatch between available support services and target group needs or preferences. Previous studies have established that programmatic support by health workers, especially high-quality communication and access, is crucial in enhancing screening rates among

women. Closing these gaps may maximize participation in cervical cancer screening and ultimately result in better health outcomes (Staley et al., 2021). The significance of support from health workers is in enhancing the quality of health services provided to the community (Ndambo et al., 2022).

Therefore, this creates great awareness, willingness, and ability within the population to maintain healthy lifestyles, thus contributing to the realization of optimal health. Despite the fact that they are given a lot of assistance by the health workers, many of them continue to miss cervical cancer screening appointments. This is attributed to other determinants influencing women of childbearing age to undergo screening, including knowledge, attitudes, education, culture beliefs, and affordability, in addition to support from family. While that happens, the individuals who continue to get minimal support may be confronted with barriers to aid delivery, i.e., social withdrawal, resistance to aid receipt, or negative interpersonal orientations such as suspicion, insensitivity, and lack of reciprocity (Chen et al., 2022; Winata et al., 2023). The support of health workers contributes significantly to the widening of women's enthusiasm and inclination towards having early detection checks. In addition, health workers are significant inducers in promoting the utilization of health services and actively reminding women to undergo cervical cancer screening within the public health center's predetermined schedule.

CONCLUSION

This study was performed with the purpose to investigate cervical cancer screening intention and factors among reproductive age women. The findings indicate that attitude, availability of health care expenses, and recommendations from health workers are strongly related to screening intention. Women who have a favorable attitude towards cervical cancer screening, perceive health services as being affordable, and receive right support from health workers are more likely to hold a strong intention to be screened. These results highlight the need to promote favorable attitudes, raise access to affordable screening services, and encourage health worker initiative in order to promote cervical cancer screening coverage. This study has several limitations that must be discussed. Data was collected using an online questionnaire distributed via WhatsApp, which will have the potential to introduce selection bias by excluding women who are not internet-savvy or are inactive on the platform. The study was only conducted in Malang city's chosen districts and thus may limit the applicability of the findings to other regions with different demographic and healthcare situations.

Declaration of Interest

The authors have no conflicts of interest to declare.

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Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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