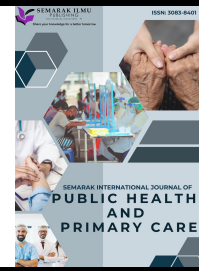




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“What If It’s Too Late?”: Unpacking Fear and Reluctance towards Cervical Cancer Screening among Women in Sarawak

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ABSTRACT

Cervical cancer remains a preventable yet under-prioritised health issue, as fear often prevents women from participating in regular screening and preventive care. This study investigates the factors contributing to this reluctance. Semi-structured interviews were conducted with 20 women aged 20 to 70. The interview transcripts were analysed using the Extended Parallel Process Model (EPPM). A pattern of avoidance behaviours emerged, including defensive strategies to downplay risks and avoid confronting the possibility of illness. Many women exhibited emotional denial, believing they were not at risk due to the absence of symptoms or family history. Others relied on previous actions, such as vaccination or healthy habits, to rationalise delaying further preventive measures. Limited and surface-level understanding of cervical cancer exacerbated these behaviours, as basic awareness did not lead to meaningful action. This avoidance delays early detection and increases the risk of poor outcomes. However, the study also highlighted instances where women employed proactive strategies, demonstrating the potential for improvement. In order to break this cycle of disengagement, public health campaigns must shift the narrative, focusing on education that empowers women to take preventive action while addressing the fears and misconceptions that hinder participation.

1. Introduction

Cervical cancer remains a significant public health concern despite being highly preventable through routine screening and early detection. Screening programmes, such as the Pap smear and HPV testing, have been proven effective in reducing morbidity and mortality rates [1]. However, participation in these preventive measures remains suboptimal in many regions where screening uptake remains low despite government initiatives promoting cervical cancer prevention [2].

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Understanding the reasons behind this reluctance is essential for improving screening uptake and, consequently, reducing the burden of cervical cancer.

Studies in Malaysia have identified various factors contributing to women's reluctance to undergo cervical cancer screening. Psychological barriers, such as fear of pain during the procedure, embarrassment, and anxiety over a possible positive diagnosis, have been cited as key deterrents [3-5]. Misconceptions and a lack of awareness about cervical cancer and its prevention further contribute to low screening participation. Research by Shariati-Sarcheshme *et al.*, [6] conducted in Mashhad, Iran, from July to December 2022, using semi-structured interview with 36 married women found that 91.7% of women did not undergo regular testing as they believed they were not at risk of cervical cancer due to the absence of symptoms [6]. This led to a false sense of security and avoidance of screening. Similarly, Romli *et al.*, [7] found that some Malaysian women in Kedah perceived Pap smears as unnecessary unless they experienced health issues [7]. This highlights the impact of limited health literacy, based on data collected through a cross-sectional questionnaire study of 210 female entrepreneurs.

Socio-cultural factors also play a significant role in shaping screening behaviours. Cultural taboos surrounding discussions of reproductive health can discourage women from seeking cervical cancer screening [8,9]. In Sarawak, traditional beliefs and reliance on alternative medicine contribute to delays in seeking medical intervention [10]. Religious and personal beliefs about modesty also influence women's willingness to undergo screening, particularly in conservative communities such as Nigeria [11] and the rural districts of Manicaland Province, Zimbabwe [8]. This trend is also observed in a range of studies conducted in various countries such as the United States of America (USA), the United Kingdom (UK), Canada, Australia and the United Arab Emirates (UAE)[12].

Financial and accessibility barriers are additional challenges to cervical cancer screening. A study by Bismelah *et al.*, on the distribution of healthcare facilities and settlements was conducted using the spatial analysis tool, Geographic Information System (GIS) found that women from rural areas in Sri Aman often faced difficulties in accessing screening services due to transportation costs, long travel distances, and limited healthcare facilities [13]. Similarly, Biddell *et al.*'s [14] study of 702 women highlighted that low-income women in North Caroline, USA, were less likely to participate in screening due to concerns about medical expenses, despite the availability of subsidised healthcare services [14]. Additionally, the shortage of female healthcare providers in some areas, such as Nepal, Kenya, Malawi, and sub-Saharan Africa, further discourages women from undergoing screenings due to discomfort with male medical personnel [15]. The findings on Malaysian women and cervical cancer were from questionnaires, which do not allow the idiosyncratic circumstances of the women to inform the understanding of barriers to cervical cancer screening. Interviews have the potential to probe into the personal circumstances (e.g., misconceptions, cultural influences, and psychological factors) which may explain how societal norms and psychological factors which present obstacles to cervical cancer screening.

The study employed qualitative interviews to explore the underlying barriers to cervical cancer screening based on the Extended Parallel Process Model (EPPM) to understand how fear, risk perception, and knowledge gaps shape screening behaviours. The findings will contribute to the development of culturally sensitive and psychologically informed interventions aimed at increasing cervical cancer screening uptake.

2. Literature Review

Despite the strong evidence supporting the effectiveness of regular screening in preventing cervical cancer, many women remain hesitant to participate in screening programmes. This

reluctance is driven by a range of factors, including socio-cultural and informational barriers. This literature review examines these factors and explores how they influence women's decisions to delay or avoid cervical cancer screening.

Fear is one of the most significant barriers that prevent women from undergoing cervical cancer screening. Both the fear of the screening procedure and the fear of receiving a positive diagnosis can lead to avoidance behaviours as shown by Bennett *et al.*, who conducted through population-based survey and home-based computer-assisted interviews with women in Great Britain [16] and Ngari *et al.*, [17] who studied women aged 15-25 years in Kithare area of Tharaka Nithi County [17]. These studies indicated that women who experience heightened fear related to cervical cancer diagnosis are less likely to go for screening. The fear can arise from concerns about the discomfort of the procedure, anxiety about the potential diagnosis, and emotional distress at the prospect of cancer. Women who experience intense fear about cancer diagnosis often avoid screening, even when they understand their risk, as shown by Vrinten *et al.*, [18] who analysed 102 studies from 26 countries using thematic analysis [18] and Murphy *et al.*, [19] who conducted a population-based survey of 2048 English adults and face-to-face interviews in England [19]. Such fear may manifest as emotional distress, leading to maladaptive coping responses, including denial and defensive avoidance, which can prevent women from seeking preventive care [20].

Another barrier to cervical cancer screening is denial, where individuals convince themselves that they are not at risk due to a lack of symptoms or family history. A descriptive study in Manisa, Turkey, showed that 718 female high school students felt "fine" and thus did not believe they are at risk [21]. Younger women or those without a family history of the disease were more prone to denial. This denial may cause women to disregard their health, avoid screening, or delay seeking medical advice, which ultimately reduces the likelihood of early detection. Women with no symptoms may also feel that the procedure is unnecessary, as they do not perceive themselves to be at risk, concluded Bennett *et al.*, based on a population-based survey of 543 women in Great Britain [16]. This false sense of security reinforces avoidance and delays engagement with preventive health practices. Misperception of risk is, therefore, a critical factor in screening reluctance, and a failure to address this issue can exacerbate non-participation in screening programmes.

Lack of awareness about the importance of screening and the associated risk of cervical cancer is also another key factor contributing to reluctance to undergo cervical cancer screening. Many women may not fully understand that screening can help to detect cancer early and reduce the risk of contracting the cancer. A study by Ducray *et al.*, [22] through questionnaire and education session with 109 women, found that women in the inner-city of Durban, South Africa were more likely to avoid cervical cancer screening due to a limited understanding of the disease, its symptoms, and the preventive measures available to them [22]. This knowledge gap is often compounded by misconceptions about the effectiveness of screening, with some women perceiving it as unnecessary or ineffective unless they have symptoms. Not only that, the lack of detailed information about cervical cancer, its early signs, and the benefits of screening often leads to passive avoidance. A systematic review of the literature from 7,264 studies conducted in low- and middle-income countries from Global Health, Embase, PsycInfo, and MEDLINE databases by Akoto and Allsop found that women with limited knowledge of the disease and screening process were less likely to participate, as they did not fully grasp the risks associated with cervical cancer [15]. Moreover, having basic knowledge about cancer prevention does not necessarily translate into proactive health behaviours. As noted by Macpherson, awareness campaigns that fail to provide comprehensive education and long-term, actionable guidance may lead to surface understanding without meaningful behaviour change [23].

Cultural norms and beliefs also play a part in shaping attitudes towards cervical cancer screening. Ozturk *et al.*, in narrative review of 25 articles from PubMed's Medline, PsychInfo, and CINAHL databases found that women in conservative societies may avoid screening due to cultural norms that discourage open discussions about sexual health [12]. These cultural barriers are particularly pronounced in conservative societies, where women's healthcare decisions may be influenced or restricted by male family members. For example, studies in South Asia and the Middle East highlight how modesty concerns and societal expectations of female chastity deter women from undergoing cervical cancer screening unless necessary. A cross-sectional study in Saudi Arabia and Pakistan with 165 women from the Six Ministry of Health hospitals in Al-Madinah Al-Munawarah has found that women often require spousal or familial permission to attend medical check-ups, creating further obstacles to preventive care [24]. In Indigenous communities, traditional health beliefs contribute to a preference for alternative medicine over medical screenings. In Sarawak, Malaysia, reliance on traditional healers and herbal treatments delays early detection efforts [25].

Financial and logistical barriers also contribute to the reluctance to undergo cervical cancer screening. In low- and middle-income countries, access to healthcare services, including screening programmes, can be limited by cost, distance, and availability of facilities. A study by Kaur *et al.*, in Malwa region of Punjab, India using one-to-one interview with 363 participants found that women in rural areas, or those without access to affordable healthcare, were less likely to participate in cervical cancer screening [26]. Moreover, the availability of trained healthcare professionals and the accessibility of screening services in underserved regions can further limit participation. Research by Coombs *et al.*, using semi-structured interviews and content analysis, found that women in the rural state of Montana faced logistical barriers, such as limited access to screening facilities and a lack of healthcare workers trained in cervical cancer prevention, which contributed to the reluctance to participate in screening programmes [27]. However, little is known as to whether Malaysian women hold similar reservations because the findings on the irrelevance of Pap smears to female entrepreneurs in Kedah were obtained through questionnaires [7].

3. Theoretical Framework of Study

The Extended Parallel Process Model (EPPM), developed by Witte, explains how individuals react to fear-based health messages. According to this model, people assess the level of threat (severity and susceptibility) and their ability to respond effectively (response efficacy and self-efficacy) [26]. Based on this evaluation, they either adopt danger control strategies, taking protective action, or engage in fear control responses, which focus on managing fear rather than addressing the risk itself.

When confronted with a health threat, individuals react in one of two ways. Danger control prompts a rational response, encouraging actions such as consulting a doctor or adopting preventive measures to reduce the risk [29]. Conversely, fear control is driven by emotion, causing individuals to focus on alleviating their fear rather than addressing the actual danger. This can lead to avoidance, denial, or rejection of the health message [30,31]. Figure 1 illustrates the EPPM model [32], which explains how individuals process fear appeals through either fear control or danger control mechanisms.

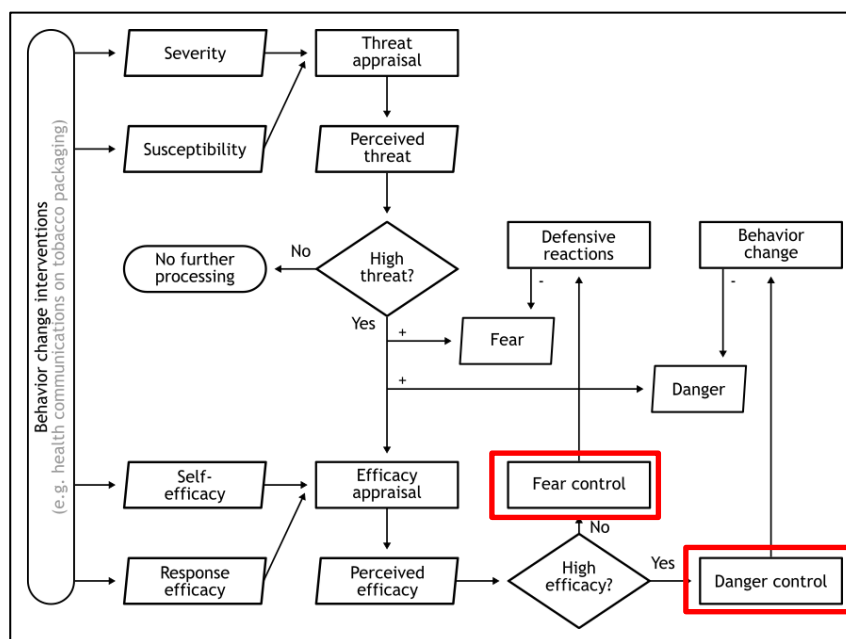


Fig. 1. Extended Parallel Process Model [32] shows fear and danger control processes in response to fear appeal

This study examines fear control, a psychological response that occurs when individuals react to health-related fear appeals by focusing on managing their emotions rather than addressing the health threat. Unlike danger control, which leads to proactive measures such as screening and preventive behaviours, fear control results in avoidance, denial, or seeking reassurance without taking necessary action [33,34].

One form of fear control is seeking social support. Individuals may discuss their concerns with family or friends to reduce anxiety. While this can provide temporary relief, it does not contribute to preventive action. Instead, it may reinforce avoidance, as individuals prioritise emotional comfort over making informed health decisions [31,35].

Defensive avoidance is another common fear control response, where individuals deliberately ignore or avoid health information to reduce distress. Research suggests that many people prefer to remain unaware of their health risks, as uncertainty feels less threatening than confronting a possible diagnosis [20]. When there is a diagnosis of possible cervical cancer, the women have to undergo further tests and consider treatment options, which may include surgery and they worry about the impact on their personal and family life. However, this avoidance can have serious consequences, as individuals who do not seek information are less likely to undergo screening, increasing the likelihood of late-stage cancer detection [36].

Denial is also a key fear control strategy, where individuals downplay their susceptibility to serious health conditions. Some women believe they are not at risk for breast cancer because they do not have a family history of the disease [37]. This perception may result in reduced participation in screening, delaying early detection and increasing long-term health risks [21,38]. While denial may reduce immediate anxiety, it contributes to underutilisation of preventive healthcare services, increasing the likelihood of adverse health outcomes [29,39].

The EPPM model is a suitable framework for examining the barriers to cancer screening and treatment, particularly in understanding how fear influences health-related decision-making. Research applying this model has highlighted the role of fear in shaping screening behaviours. For instance, Razi *et al.*, found that based on the 86 questionnaires gathered from women attending three health centres in Khalkal, Northwest Iran and analysed through SPSS, women experienced

heightened fear were more likely to engage in avoidance and denial, ultimately reducing their participation in screening [40]. Similarly, survey with 258 survivors at Massachusetts General Hospital Cancer Center revealed that fear of diagnosis and treatment contributed to emotional distress, leading women to avoid cervical cancer screening instead of taking preventive action [41]. Witte *et al.*, [29] further emphasised the importance of crafting health messages that promote danger control responses rather than inadvertently triggering fear control, which can deter individuals from undergoing screening [42].

4. Methodology

This study adopted a descriptive research design to investigate fear control responses linked to factors influencing women's refusal of cervical cancer screening in Kuching, Malaysia. Using purposive sampling, 20 participants, aged 20 to 70, were recruited using purposive sampling, with no exclusions based on their prior experience with cervical cancer or health condition.

The study utilised a range of instruments, including a demographic questionnaire, stimulus material, and an interview guide. Participants first completed a demographic questionnaire, which collected details such as age, occupation, education level, and any personal or family history of cervical cancer. In order to elicit fear control responses, a cervical cancer awareness poster from the National Cancer Institute of Malaysia served as the stimulus material (Figure 2). The poster incorporated fear appeal elements, emphasising the severity of cervical cancer through statistical data, risk factors, and symptoms. The content highlighted the high prevalence of cervical cancer among Malaysian women, along with key risk factors such as family history, smoking, and multiple sexual partners. The interview guide was designed to explore fear control behaviours, including denial, defensive avoidance, and reassurance-seeking. The probing questions such as “How do you feel after viewing the information in this poster?” and “What are your thoughts on the risks outlined here?” were employed to gain deeper insight into participants’ attitudes and perceptions.

During data collection, participants first reviewed the posters and then took part in a semi-structured interview to discuss their emotional reactions and thoughts on the information. With their consent, the interviews were audio-recorded and transcribed verbatim. The data were then coded to identify key themes related to fear control responses. The analysis focused on understanding how participants managed fear and anxiety when presented with cervical cancer information, highlighting emotional barriers to preventive health behaviours.



Fig. 2. Poster on the risk and symptoms of cervical cancer, taken from the National Cancer Institute website [43]

5. Results

Analysis of the interview data revealed denial and avoidance as the primary fear control responses that hinder women from participating in regular cervical cancer screening. These responses were manifested through the downplaying of risk, rationalisation of inaction, and a superficial understanding (Figure 3).

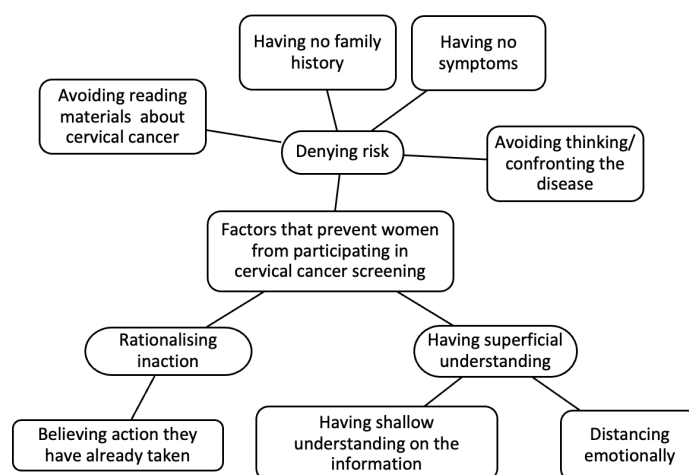


Fig. 3. Factors that prevent women from participating in cervical cancer screening

One of the most prominent barriers is the avoidance of risk. Many participants expressed avoidance of thinking about the threat of cervical cancer. For instance, a designer, Participant 19, remarked, "I try not to dwell on it," indicating cognitive and emotional avoidance. This coping mechanism allows individuals to avoid confronting the possibility of the disease, thereby postponing the decision to undergo screening. Besides, a bakery shop owner voiced a concern about the potential consequences of screening, stating, "What if I go for a screening and find out it's too late? No, I would rather not know than spend the rest of my time worrying." (Participant 24). Not only that, Participant 36, a 40-year-old housewife, also showed a similar response when asked about how she managed her fear. She mentioned, "In our culture, cancer is almost like death. If I go for the test and it's positive, then what? I would rather live in peace, not knowing." Such responses have demonstrated how avoidance has become a strategy of maintaining emotional stability, even at the expense of health-seeking actions.

The second factor that prevents women from participating in cervical cancer screening is the denial of risk. This denial was most apparent among women who reported having no family history of disease. An Indian financial analyst mentioned, "I don't have any family history, so I don't think it can happen to me". (Participant 27). From her words, she equated familial history with personal susceptibility and discounted other risk factors. This shows that she has neglected the different factors of cervical cancer. Not only that, the bakery shop owner (Participant 24) and a Bidayuh teacher (Participant 28) also expressed denial of cervical cancer screening and its risk by avoiding information on the topic. The bakery shop owner explained, "I don't read about it because it makes me worry only. If I don't look at it, it does not feel like a danger to me." This tendency was to minimised threat was also stated by the Bidayuh teacher who mentioned, "I feel healthy, I don't have symptoms, so why would I think I have a problem?". In the long run, this prevents women from acknowledging the importance of regular screening, as they convince themselves that they are not "the type" of person who is at risk, which ultimately leads to a lack of preventive action.

Rationalisation of inaction is also another factor that prevents women from taking cervical cancer screening. Participants, when asked about their thoughts on the preventive action, justified their decision not to undergo screening by stating that other preventive measures, such as vaccination and lifestyle modification, they had already adopted. For instance, An Iban teacher (Participant 17) explained, "I've been vaccinated against HPV and try to live a healthy lifestyle," while Participant 18, a retail manager, said, "I try to take the [preventive] steps." These replies showed that they believed the existing health practices were sufficient to safeguard themselves from cervical cancer. Thus, the necessity of routine screening was perceived as unnecessary. Other than justifying their inaction to vaccination and lifestyle modification, there were also participants who viewed screening as an optional measure. Participant 29, a Bidayuh admin, explained, "I eat well, I don't smoke, I take care of myself. I don't think I need anything extra." Likewise, a tailor (Participant 22) also added on by mentioning, "I have already done to protect myself, why should I go through the worry again?" Such perspectives give women a sense of safety to cope with the conflict between knowing that screening is important and deciding not to do it.

Lastly, the superficial understanding of cervical cancer has also limited the engagement towards medical screening. While most participants recognised its association with HPV and the importance of Pap smear in early detection, they believed that surface familiarity with the cancer was sufficient. Participant 25, a Bidayuh housewife, stated, "I have heard about HPV and Pap smears, and that's enough. I don't need to know all the details." Similarly, Participant 30, a Chinese teacher, described knowing "the basics [of the disease]" as sufficient to avoid feeling frightened. This shows that having partial knowledge, coupled with denial and avoidance, has created barriers to screening behaviours. Moreover, social stigma has also disengaged participants with relevant knowledge and information.

As Participant 32, a businesswoman, explained, “It’s better not to know so much because talking too much [about cervical cancer] makes people look at you differently.” This shows that the lack of knowledge was not simply individual shortcomings but was reinforced by social silence and fear of stigma.

6. Discussion And Conclusions

The study examined the factors contributing to the reluctance of cervical cancer screening among Sarawakian women. Four factors, namely, avoidance of risk, denial of risk, rationalisation of inaction and superficial understanding, have been identified. While these findings align with much of the existing literature, certain aspects of the study’s results provide novel insights that contribute to a more nuanced understanding of the reluctance to engage in regular screening.

Denial and avoidance of risk emerged as the most pervasive barriers in promoting cervical cancer screening. Participants frequently dismissed their susceptibility by citing the absence of family history and a healthy lifestyle. This is similar to the avoidance behaviours mentioned in the studies by Adedimeji *et al.*, [44] and Lee *et al.*, [4] and is consistent with research on cervical cancer, where perceived susceptibility is a documented obstacle [45]. More importantly, many participants engaged in information avoidance to maintain psychological stability. This reflects a point whereby acknowledging vulnerability would require confronting the fear and cultural stigma associated with the diagnosis, a situation detailed in the study by Kobetz *et al.*, [46] on cancer fatalism. Thus, avoidance and denial would function as buffers, allowing them to feel short-term security while deferring prevention actions. As a result, the risk communication of cervical cancer will not be effective.

Not only that, the rationalisation of inaction complements denial and avoidance by providing an excuse for it; deciding to skip screening feels justified. Participants consistently justified their decision to forgo screening by highlighting other preventive behaviours such as HPV vaccination or maintaining a healthy lifestyle. This cognitive reframing serves as a self-reassuring mechanism to reduce anxiety. As noted by O’Connor *et al.*, in their study of health behaviours, such health-related rationalisations are a common strategy to justify inaction towards one health goal by pointing to actions in another area [47]. While this may be effective in providing short-term emotional relief, the misconception creates a false sense of security and creates gaps in preventive care and risk communication, as vaccination alone does not eliminate risk from cervical cancer [48].

A key contribution of this study is its identification of superficial understanding as a subtle barrier. While most participants demonstrated baseline awareness of cervical cancer, this knowledge was often deemed sufficient. As a result, it created a false sense of security that hindered deeper inquiry. This suggests that informational campaigns have limited impact when the message delivered does not bridge them to knowledge gaps about risk, prevention and the screening procedures [49]. Indirectly, superficial understanding has also resulted in the denial of risk and the rationalisation of inaction. This is because the shallow knowledge allows people to dismiss their risk and inaction by reasoning that they are already sufficiently informed and have done enough to protect themselves. Thus, there is no need to seek out deeper facts that would challenge their avoidance towards preventive behaviours.

Furthermore, the findings highlight the role of social stigma in amplifying these barriers of denial, rationalisation of inaction and superficial understanding. The fear of being “looked at differently” for discussing cervical cancer discourages open dialogue and motivates inaction, making screening an abnormal health behaviour. Not only that, it has also resulted in denial and inaction being necessary for self-protection. This aligns with research by Marlow *et al.*, [50] which documented how stigma

and embarrassment act as critical barriers to cervical screening participation in various cultural contexts [50]. Consequently, health communication strategies must integrate and leverage social support mechanisms to destigmatise the disease and foster community-level conversations, as demonstrated in successful interventions using community health advocates [51].

One limitation of this study is its primary focus on individual-level psychological responses. While these barriers were identified, future research should explore how these broader socio-cultural structures interact with and reinforce the fear control responses identified using frameworks like the Socio-Ecological Model (SEM) [52]. While the EPPM model provides individual psychological reactions to the risk of cervical cancer, it does not explain why such a reaction is culturally rational or difficult to overcome in the community. In contrast, SEM is a framework for understanding behaviour by analysing how individual factors and environmental factors interact. Thus, SEM would complement the data obtained through EPPM by revealing how denial and avoidance in cervical cancer are not just because of a person's own fears but rational responses to external pressures. This will provide a more complete understanding of screening reluctance for cervical cancer.

In conclusion, effective cervical cancer risk communication requires more than awareness campaigns. The authorities can implement pre-emptive messages that counter rationalisation, like over-reliance on vaccination to counter excuses and talk before people have a chance to use them as a reason not to get screened. Besides, the local authorities and community leaders should also share their own experience about getting screened. This will help to make the topic less embarrassing and show that screening is a normal and positive part of taking care of own health.

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