

A Narrative Review on Bridging the Gap in Women's Health: Self-Help Group versus Accredited Social Health Activist-led Cervical Cancer Screening Strategies in India

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ABSTRACT

Cervical cancer has continued to be a major public health menace and the leading cause of deaths resulting from cancer among women Low and Middle-Income Countries (LMIC) particularly in India. There are very effective screening methods that include Pap smears and Visual Inspection with Acetic acid (VIA), but cervical cancer screening coverage rates remain at appallingly low levels due to a combination of sociocultural and systemic barriers. The population has inadequate information, suffers from stigmatisation, lacks easy access to healthcare facilities, and does not seek treatment; hence late diagnosis leads to high mortality rates. Community-based strategies have been able to effectively sensitise people and facilitate their screening uptake. Two such grassroots approaches that this paper will attempt to review and comparatively analyse are Self-Help Group (SHG)-based interventions and Accredited Social Health Activist (ASHA)-led awareness drives. ASHA workers are health facilitators appointed by the government, who help greatly with the mobilisation of women and establishment of linkages with the healthcare services whereas in the SHG-based model, peer influence, group dynamics, and participatory learning create behaviour change in a community. Through a synthesis of recent studies and evaluations of programs, the present article rates the relative efficacy, reach, acceptability, and sustainability of both models. Results indicate that though ASHA-led efforts might be critical due to their existence within the healthcare system, SHG-based intervention has a higher possibility of creating long-term impact because of peer trust, empowerment, and community ownership. A hybrid model integrating both strategies can be proposed as a pathway that would work synergistically toward improving coverage for cervical cancer screening in varied Indian settings.

Keywords: Community health interventions, Early detection, Health promotion, Preventive care, Public health strategies

INTRODUCTION

Cervical cancer is a preventable yet highly prevalent disease, ranking as the second most common cancer among Indian women, with an estimated 123,907 new cases and 77,348 deaths annually [1]. contributes significantly to cancer-related morbidity and mortality, particularly in LMICs, where access to timely screening and treatment is limited. In India, the burden is disproportionately high due to socioeconomic disparities, cultural stigma, and gaps in health literacy [2].

India's cervical cancer screening rate is extremely low, with only nearly 1.9% of women aged 30-49 years having ever undergone a screening test, according to National Family Health Survey (NFHS)-5 data. Urban women reported slightly higher rates nearly 2.4% than rural women nearly 1.8%, resulting in a small urban-rural difference of about 0.6 percentage points [3]. Study shown women aged 30-49 estimated the prevalence at 1.9% (95% CI: 1.8-2.1%), with screening uptake significantly associated with higher education, better wealth status, urban residence, and older age group (40-49 y) [4]. There are stark state-level disparities: Gujarat, Assam, and West Bengal have some of the lowest screening rates (0.2%), while Tamil Nadu leads with 9.8-10.1% coverage [5].

Despite India's adoption of national screening guidelines using VIA, overall cervical cancer screening coverage remains at just 1.9% well below the 30% threshold in contrast to countries like Bhutan (77%) and Turkey (95%) [6]. These low participation rates are attributed to a combination of factors, screening programs remain fragmented, underfunded, and poorly accessible particularly in rural areas due to barriers such as low awareness, fear, embarrassment, lack of spousal support, high out-of-pocket costs, and long travel distances [6].

High participation and treatment compliance in cervical cancer screening can be effectively achieved in rural India through well-planned outreach strategies. The study found that younger, better-educated, and married women were more likely to undergo screening and follow-up treatment, irrespective of the screening method used. However, to further enhance coverage, targeted interventions are essential to engage older and less-educated women who are less likely to access reproductive health services [7].

To combat this gap, public health initiatives have increasingly focused on community-based awareness strategies that aim to empower women at the grassroots level and create a culturally sensitive environment for discussing reproductive health issues. Two such widely implemented approaches in India are:

1. ASHA-led awareness campaigns; and
2. SHG-based education models.

ASHAs are trained female community health workers appointed under the National Health Mission. Their role includes health education, home visits, mobilising women for antenatal care, immunisation, and increasingly, for screening of non communicable diseases. Their responsibilities now extend beyond maternal and child health to include promotion and facilitation of screening for non communicable diseases-notably cervical cancer [8].

In parallel, SHG small, informal collectives of women involved in microfinance and community development have emerged as valuable platforms for delivering health education. With strong peer support and trust within the group, SHGs can serve as effective channels for awareness generation and mobilisation for screening programs [8-10].

The present study aims to explore and compare the effectiveness of two key community-based strategies-SHG-based peer education and

ASHA-led outreach in promoting awareness and uptake of cervical cancer screening among women in rural and semi-urban India.

A narrative review approach was adopted. Literature was sourced from PubMed, Scopus, and Google Scholar using keywords such as "ASHA workers cervical cancer," "SHG health education," "cervical cancer awareness India," and "community-based interventions screening." "The included studies were published between 2016 and 2025," evaluating the role of ASHAs or SHGs in cervical cancer screening promotion in India or similar LMIC settings.

Overview of Awareness Strategies

ASHA-led awareness campaigns: ASHAs launched under the National Rural Health Mission in 2005, serve as the primary link between India health system and rural, tribal, or remote communities. Selected from within the community, ASHAs are trained in maternal and child health, immunisation, infectious diseases, and increasingly in non communicable diseases including cervical cancer [11].

Training for ASHAs is delivered largely through the National Institute of Cancer Prevention and Research (NICPR) under National Health Mission (NHM) nodal training model, using digital platforms like Project for Extension for Community Healthcare Outcomes (ECHO) for wide-scale capacity-building [12]. ASHAs receive modules on cervical cancer, risk factors, VIA screening, Human Papillomavirus (HPV) self-sampling, referral protocols, and follow-up procedures [13].

In the context of cervical cancer screening, ASHA workers are responsible for:

- Mobilising women for screening camps at Primary health centres or outreach sites.
- Conducting home visits to educate women aged 30 to 60 about cervical cancer, risk factors, and prevention.
- Distributing information, education, and communication materials (leaflets, flipcharts, visuals) in vernacular languages.
- Accompanying low-literacy or hesitant women to screening sites.
- Referral and follow-up for women who screen positive.
- Community outreach via village health and nutrition days and local health events.
- Myth busting and stigma reduction, particularly around gynaecological examinations.

Recent innovations such as telemedicine-based training for ASHA-led HPV, self-sampling show promise. The TRACK (telemedicine-based training) study trained 47 ASHA workers via mobile app and telecounselling to facilitate home-based HPV kit delivery to 465 women. Results included high ASHA satisfaction (over 90%) and strong client acceptability (98% found self-sampling easy), demonstrating feasibility and acceptability of digital training models for enhancing screening outreach [14]. Furthermore, qualitative research applying the reach, effectiveness, adoption, implementation, maintenance framework found that ASHA-driven HPV self-sampling was enabled by community trust, home-based autonomy, and proper training, although barriers included poor health literacy and low incentives [15].

Despite their crucial role, ASHAs often face challenges due to heavy workloads, inconsistent training, and limited logistical support. ASHAs operate under outcome-oriented monitoring within the NHM and National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) frameworks [16]. They receive their incentive payments late, or in diminished amounts which undermine motivation and trust in the system [17]. The work burden placed on ASHAs often does not align with the incentive structure. Many feel the compensation does not adequately reflect their workload [18]. In some districts, tablet-based systems for data entry and monitoring are slow or unreliable, causing disruptions in reporting, referrals, and documentation workflows slashing time available for outreach and household follow-up. This undermines both

performance tracking and overall motivation [19]. Low cervical cancer screening uptake among ASHAs themselves reflects important gaps in awareness and self-care, which may reduce their effectiveness in promoting screening within the community. Evidence from different studies demonstrates variability across settings. One study reported that only 1.5% of ASHAs had undergone cervical cancer screening, whereas a cross-sectional study conducted in Odisha found that less than 9.1% of ASHAs had ever been screened. Despite the difference in reported proportions, both studies consistently indicate that screening uptake among ASHAs remains unacceptably low, emphasising the need for targeted educational interventions, regular screening opportunities, and supportive incentive or reward systems to strengthen both their personal health practices and their effectiveness as community health. They are thus essential mobilisers in rural cervical cancer screening efforts. Their community integration, when supported through proper training, motivation, and digital innovations, makes them highly effective in raising awareness and driving uptake [20,21].

However, Cervical cancer screening awareness in Indian rural and semi-urban contexts demands strategies that balance technical rigor with cultural relevance. ASHAs, as ASHAs, are embedded within the NPCDCS. This institutional framework empowers them with structured training in cervical cancer screening such as VIA Acid, HPV self-sampling, and referral protocols and supports their role in household mobilisation and Information, Education and Communication (IEC) distribution [13].

Despite these strengths, ASHAs face considerable structural challenges. Shukla P et al., identified key barriers such as minimal supportive supervision, absence of earmarked incentives, and weak referral systems that undermine ASHA motivation and effectiveness in NCD and cancer screening tasks [8]. Similarly, Hariprasad R et al., highlight logistical challenges, health literacy gaps in communities, and inadequate incentives as impediments to ASHA-led HPV self-sampling initiatives in Sikkim based on a RE AIM framework study [15].

Boratne AV et al., found that only 37.6% of SHG women in rural Puducherry were aware of cervical cancer, and 99.2% had never heard of Pap smear or HPV vaccine. Awareness was significantly linked to education and socioeconomic status [9].

Several interventions using SHG platforms have demonstrated strong effectiveness in boosting cervical cancer awareness and screening uptake. In a multi-site action-research model, Raju S et al., conducted focused workshops with customised IEC materials for SHG women and observed a statistically significant rise in knowledge regarding cervical cancer symptoms, prevention, and screening sites in intervention communities compared to controls [22]. Hombaiah C et al., implemented an mHealth-enabled educational program among social support groups (akin to SHGs) from lower socioeconomic settings: post-intervention knowledge about warning signs, risk factors, and HPV vaccination increased dramatically (median scores rising by up to 30-fold), and Pap smear uptake rose by approximately 5% [10].

Research also demonstrates the effectiveness of peer-led mobile screening models: Srinivas V et al., reported that in 190 screening camps led by trained peer educators, 92.8% of registered women accepted screening, indicating strong community buy-in when facilitated through trusted networks [23].

The evidence suggests that a hybrid model where ASHAs provide initial technical outreach and referral, while SHGs sustain ongoing peer dialogue and local mobilisation can leverage the strengths of both approaches. This strategy balances institutional reach with grassroots ownership. To be successful, the hybrid model must integrate joint training, shared monitoring systems, culturally adapted delivery methods, and functional linkages between SHGs and health facilities.

Policy Implications of a Hybrid ASHA-SHG Cervical Cancer Screening Approach

- 1. Collaborative training and capacity building:** Effective implementation requires joint training sessions for ASHAs and SHG facilitators to ensure consistent knowledge, skill development, and alignment in community engagement strategies.
- 2. Incentive structures:** Designing incentive systems that reflect collective performance goals can motivate both ASHAs and SHG members, fostering teamwork and sustained participation in screening programs.
- 3. Referral and follow-up pathways:** Establishing clear referral mechanisms linking community groups to Primary Health Centers (PHCs) ensures timely follow-up, proper diagnosis, and continuity of care for women identified at risk.
- 4. Participatory education materials:** Developing interactive and culturally appropriate educational resources in local languages and accessible formats can enhance community understanding, acceptance, and engagement in screening activities.
- 5. Monitoring and evaluation:** Implementing monitoring frameworks to assess both immediate uptake and long-term behavioural retention is critical for evaluating program effectiveness and informing policy decisions.

Such integrated strategies can address both structural barriers and psychosocial resistance to cervical cancer screening, offering a scalable and culturally grounded pathway to reduce cervical cancer burden across underserved populations in India.

CONCLUSION(S)

Cervical cancer remains a major public health challenge in India, especially among rural women. ASHAs play a critical role in raising awareness due to their formal health training and grassroots presence. However, their effectiveness can be limited by workload, lack of incentives, and time constraints. SHGs offer a complementary, peer-driven model of awareness building. SHGs foster trust, collective learning, and culturally sensitive communication. They are effective in addressing stigma and promoting open discussions about screening. Integrating ASHA-led outreach with SHG-based support can strengthen screening programs. This dual strategy enhances both initial participation and long-term adherence. Health policies must support joint training, IEC development, and community-health linkages. Such collaboration can improve screening coverage and reduce cervical cancer mortality.

Authors' contribution: AS: Conceptualisation and design of the study, literature search and review, data collection, data analysis and interpretation, manuscript drafting, and critical revision of the manuscript; DM: Contribution to the study design, literature review, data collection, interpretation of findings, and critical revision of the manuscript; JK: Contribution to literature review, data collection, analysis and interpretation of findings, and critical revision of the manuscript; MS: Contribution to data collection, interpretation of findings, review of the manuscript, and critical revision for important intellectual content; PS: Contribution to literature review, data interpretation, manuscript review, and critical revision for important intellectual content. All the authors participated in drafting and/or critically revising the manuscript, approved the final version for publication, and agree to be accountable for all aspects of the work, ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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PLAGIARISM CHECKING METHODS: [\[Jain H et al.\]](#)

- Plagiarism X-checker: Aug 16, 2025
- Manual Googling: Aug 05, 2026
- iThenticate Software: Aug 07, 2026 (5%)

ETYMOLOGY: Author Origin

EMENDATIONS: 8

AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? No
- For any images presented appropriate consent has been obtained from the subjects. NA

Date of Submission: **Aug 06, 2025**

Date of Peer Review: **Sep 17, 2025**

Date of Acceptance: **Aug 09, 2026**

Date of Publishing: **Nov 01, 2026**