Short Review

Review: Knowledge and Prevalence of Cervical Cancer Screening Among Women Receiving Prenatal Care in Accra, Ghana

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Study Overview

This cross-sectional study examined cervical cancer screening (CCS) knowledge and prevalence among 393 women receiving prenatal care at three health facilities in the Okaikwei North Municipal Assembly, Greater Accra Region, Ghana. Utilizing a two-stage cluster sampling method, the research targeted women over 18 years attending Achimota Hospital (36.6%), Lapaz Community Hospital (32.1%), and NK-Salem Medical Centre (31.3%). The study addressed a critical gap in understanding CCS awareness among pregnant women, a high-risk population with frequent healthcare contact opportunities. The research employed a quantitative methodology with data collection through REDCap electronic surveys administered in English and Asante Twi. Knowledge of CCS was assessed using 12 questions scored from 0-12, with participants categorized into low (0-4), moderate (5-8), and high (9-12) knowledge levels using percentile-based classification. Analysis of covariance (ANCOVA) was used to compare CCS knowledge scores across facilities while controlling for demographic variables including age, marital status, education, employment, and income.

Key Findings

The study revealed alarmingly low levels of both CCS knowledge and screening prevalence. Only 19.8% of participants demonstrated high CCS knowledge, with the majority (98.5%) scoring below adequate levels. The overall mean CCS knowledge score was 3.0 ± 2.57 out of 12 possible points. While 75.6% had heard of CC and 68.4% were aware of CCS, substantial knowledge gaps existed when probed further, thus 46.5% did not understand what CCS entailed, 71.7% were unaware of screening intervals, 62.0% did not know the recommended screening age, and only 33.9% correctly identified Pap smear as the primary screening test. The prevalence of CCS was remarkably low at 7.4%, with 90% of participants never having been screened. This finding aligns with Ghana's national CCS rates of 2-3% and reflects broader challenges in sub-Saharan Africa where over 85% of global cervical cancer cases occur. Participants correctly identified key risk factors including multiple sexual partners (23.3%), STI infections (18.0%), and early sexual onset (13.1%).

Significance and Inter-facility Variations

A significant finding was the substantial variation in CCS knowledge across health facilities. ANCOVA results revealed statistically significant differences (F (2,384)=75.03, p<0.001, ηp^2=0.281), with facility type accounting for 28.1% of variance in knowledge scores beyond demographic factors. Pairwise comparisons showed that women at Achimota Hospital (M=4.33) and NK-Salem Medical Centre (M=4.74) had significantly higher knowledge scores compared to Lapaz Community Hospital (M=1.25). These differences raise facility-specific factors such as patient education programs, healthcare provider engagement, or access to health information materials may influence knowledge levels.

Among demographic covariates, income (ηp^2=0.187) and marital status (ηp^2=0.144) had the strongest influence on CCS knowledge, followed by age and education. This indicates that financial stability and spousal support may positively affect CCS awareness, while younger, less-educated, and lower-income women face greater knowledge barriers.

Limitations and Methodological Considerations

The study acknowledges several limitations that affect generalizability. The single-district focus in Greater Accra may not represent all Ghanaian women receiving prenatal care, particularly those in rural areas or different socioeconomic contexts. The two-stage cluster sampling method, while enhancing representativeness within the district, may introduce selection bias if certain clusters are more likely to be selected. Additionally, reliance on self-reported data introduces potential recall and social desirability biases.

The cross-sectional design prevents assessment of knowledge changes over time, and the focus on prenatal care attendees may not reflect the general population's CCS knowledge. The study's strength lies in its robust sample size (92.9% response rate), rigorous statistical analysis controlling for demographic confounders, and focus on a high-risk population with regular healthcare contact opportunities.

Implications and Future Directions

The findings reveal critical gaps in CCS knowledge and uptake that require urgent intervention. The significant inter-facility differences suggest that targeted, facility-specific interventions may be more effective than uniform approaches. The research recommends integrating structured cervical cancer education into routine prenatal care through health talks, standardized materials in local languages, and most importantly pre- and post-natal counseling sessions.

Practical interventions should include mobile screening clinics, community health worker outreach, and culturally appropriate educational materials. Catering for groups that are characterized by no formal education and unstable financial stability, the employment of existing social networks such as market associations, church groups, neighborhood committees could benefit from CCS education and mobile screenings. The study emphasizes leveraging social media and local dialects for awareness campaigns, as participants identified social media as their primary information source (31.0%). Future research should conduct multi-site studies across different geographical areas/ regions to examine disparities among the geographical areas to understand the specific barriers that exist to screening uptake.

Conclusion

This study provides compelling evidence of the urgent need to strengthen cervical cancer prevention efforts in Ghana's prenatal care settings. The combination of low CCS knowledge levels (19.8% high knowledge) and minimal screening prevalence (7.4%) among pregnant women represents a missed opportunity for early detection and prevention. The significant facility-based variations in CCS knowledge calls for targeted interventions considering the local contexts and demographic factors. Implementing these interventions could substantially improve outcomes. As prenatal care provides a structured platform for health education, integrating comprehensive CCS awareness programs could dramatically enhance early detection rates and reduce cervical cancer mortality in Ghana. The research contributes essential insights for developing evidence-based interventions that address both knowledge gaps and systemic barriers to screening access.