

Breast Cancer Screening Uptake in Rural Areas, in Saudi Arabia: Rates, Influencing Factors and Barriers

Aljuaid, Mohammed

Department of Health Administration, College of Business Administration, King Saud University, Riyadh, Saudi Arabia

Alonazi, Mashari

Department of Health Administration, College of Business Administration, King Saud University, Riyadh, Saudi Arabia

Abstract

Background: Rural women face specific challenges in completing breast cancer screening at recommended intervals. Studying rates and correlates in rural Saudi settings is necessary to align practice with national goals.

Objective: To estimate screening uptake among rural Saudi women aged 40–69 years and to describe enabling conditions, knowledge and belief patterns, access, and perceived barriers associated with participation.

Methods: An analytical cross-sectional survey included 522 rural women aged 40–69 years. Outcomes were ever having a mammogram, being up to date within the last 24 months, and breast self-examination (BSE). Explanatory domains covered attendance at awareness sessions, physician recommendation, access to a female physician, spouse support, trust/communication, knowledge (percentage score), health beliefs (seriousness, benefits, susceptibility, barriers), access/logistics (5-point indices), and perceived barriers (item-level scores). Group differences were examined with chi-square tests and mean comparisons as reported.

Results: Ever-mammography was 66.1%, while up-to-date screening within 24 months was 34.9%. BSE was practiced regularly by 31.8% and occasionally by 37.7% (30.5% did not practice). Only 33.7% had attended any awareness session and 48.1% received a direct physician recommendation; access to a female physician was 60.7% and spouse support was 62.3%. Knowledge averaged 60.5%±16.4%; 77.2% recognized hereditary risk and 76.8% the benefit of early detection, while 27% believed breast pain always indicates cancer. Health beliefs showed high seriousness (3.76±1.12) and benefits (3.72±1.13), moderate susceptibility (3.13±1.18), and notable barriers (2.38±1.16). Access/logistics were mid-range (overall 3.33±0.55). Perceived barriers were moderate (2.28±0.32), with the highest items for deficient equipment (3.79±1.00) and low knowledge (3.66±1.16); cultural modesty (2.21±1.10), fear (2.28±1.14), and practical frictions (cost, transport, waiting ≈2.3) were lower. Ever-mammography was associated with marital status ($X^2=24.75$, $p<0.001$), physician recommendation ($X^2=7.82$, $p=0.005$), availability of a female physician ($X^2=3.94$, $p=0.047$), trust/communication ($X^2=10.77$, $p=0.013$), and spouse support ($X^2=5.42$, $p=0.020$). Recent mammography correlated with marital status ($p=0.002$) and physician recommendation ($p=0.035$). Women screened within 24 months had higher knowledge (77.99 vs 52.18, $p=0.024$). Ever-screened women reported better access ($p=0.039$) and lower perceived barriers ($p=0.044$). BSE practice correlated with higher knowledge ($p=0.040$).

Conclusion: Screening rates in this rural cohort were lower than urban and general benchmarks reported for organized programs, with a wide gap between “ever screened” and “up-to-date.” The most prominent barriers were low awareness and perceived equipment scarcity, while modesty, fear, and direct costs scored lower. Strengthening routine physician recommendation, improving local imaging capacity, and correcting key misconceptions may raise adherence.

Keywords

Breast cancer, mammography, rural Saudi Arabia, screening uptake, equipment availability, awareness, health beliefs, breast self-examination.