

in this marginal community. As presbyopia affects every individual aged 40 years and above, bringing these services to communities will provide an opportunity for public sensitization, screening, early detection and management of other blinding eye diseases which are also common in this age group.

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### Perceptions of Breast Cancer among Muslim Women in Ghana: An Opportunity for Targeted Breast Health Education in Sub Saharan Africa

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**Background:** The burden of breast cancer continues to increase in Low and Middle Income Countries (LMICs). Within this, Muslim women are observed to present with more advanced disease and worse outcomes. With mammography absent and widespread clinical breast examination (CBE) lacking, screening often relies on breast self-examination (BSE). However, little is known regarding the role of religion in a woman's perceptions and practice of breast health.

**Methods:** A cross-sectional survey was administered to female members of Islamic and Christian organizations in Ghana. Participants were asked about their personal experience with breast concerns and their performance of BSE or participation in CBE. Additionally, the survey queried participant's perception about breast cancer and assigned a perception score (maximum score of 9).

**Findings:** The survey was administered to 432 Muslim and 339 Christian women. Muslim women were less likely to have finished secondary school (29% vs 43%;  $p < 0.001$ ), to have received instruction on BSE (33% vs 81%,  $p < 0.001$ ), or to have performed BSE (30% vs 75%;  $p < 0.001$ ). Muslim women had a higher breast cancer perception score compared to Christian women (median score of 6; IQR 5–7 vs 4; IQR 4–6;  $p < 0.001$ ). Having received BSE instruction and knowing someone who had breast cancer increased the odds of performing BSE while being Muslim and increasing age decreased the odds. There was no evidence for increased breast cancer perception score reducing the odds of performing BSE.

**Interpretation:** Muslim women are less likely to perform BSE than their Christian counterparts, despite appearing to have a better perception about breast cancer. While there is need for widespread improvements to breast health campaigns in LMICs, this study reveals the need for special attention towards improving screening education among Muslim women.

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### Using Saliva as a Biomaterial for Screening of Non-Communicable Diseases in African Countries

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**Background:** There is an increased research effort for identifying, understanding and intervening the rising of physical, emotional and financial burdens of non-communicable diseases in African countries including Rwanda. At present, identifying the blood-based markers is the gold standard for monitoring most of the non-communicable diseases, including diabetes, hypertension and obesity. However, blood-based biomarker studies are not always convenient and risk free; particularly in African countries where such blood-based analysis poses risk of infection & disease transmission. In contrary, saliva is very easy to collect.

**Methods:** Saliva is a noninvasively obtainable biomaterial and is successfully used for early detection of biomarkers, such as insulin, C-reactive protein (CRP), adiponectin and phosphate in various non-communicable diseases.

**Findings:** It has been found from recent studies that some biomarkers appear in saliva much earlier than in blood. For instance, a significant elevation of salivary phosphate content was associated with the involvement of obesity of a group of children, while no such changes in phosphate levels were noted in plasma among the same group of children, collected simultaneously (with saliva). The occurrence of increased salivary phosphate levels without its systemic changes could be of enormous diagnostic value, particularly in monitoring the involvement of non-communicable metabolic diseases. In a similar line of observation, three salivary biomarkers, insulin, C-reactive protein (CRP), and adiponectin provided strong associations with the development of childhood obesity, in a prospective study.

**Interpretation:** In this presentation, we will highlight the importance of adopting salivary biomarkers as part of patient screening system to reduce blood-related disease transmission, and to make it more cost-effectiveness, without affecting the quality of the patient care, in African countries including Rwanda.

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### Identifying Daily Stress, Family Conflict and Health Care Resource Gaps at the Sri Lankan Tamil Refugee Camps in India: Implications for Developing an Evidence-based Family Intervention for Refugees

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**Background:** Numerous epidemiological studies have shown that daily stressors are associated with refugees' physical/psychological health difficulties. Research has also identified strong associations between refugee health difficulties and complex refugee family