Influence of role in intra-household decision making on the uptake of gynaecological cancer screening practices among women (aged 45 years and above): Evidence from India

Background

Globally, cancer is emerging as a major health issue; in both the developed and the developing parts of the world. In India, the total cancer cases are projected to likely increase by roughly 25 per cent by the year 2020, keeping 2015 as the base year (NCRP, 2016). Breast and cervix are the leading sites of cancer among women in India. Early diagnosis and treatment plays a crucial role in improving cancer survivorship (Rajpal et al, 2018). However, as observed in various studies, diagnosis of cancer, particularly among the women, happens at advanced stages with heightened severity of the disease which may be attributed to the fact that there is inadequate awareness, disempowerment, stigma and inappropriate health seeking behaviour among the women. The World Health Organisation recommends regular screening of all women at risk of gynaecological cancers, even if asymptomatic, in order to detect pre-cancerous changes, which, if left untreated, may prove to be fatal.

Delay in diagnosis has been attributed as the main reason for poor patient survival rates (Johnson et al., 2011). Diagnostic delay is an accumulation of a range of patient delay, professional delay, and health system delay (Dwivedi et al., 2012). Previous research has indicated that patient delay constitutes most of the overall total delay time and is influenced by the patients' characteristics especially their health-seeking behaviour (Scott et al., 2006; Quaife et al., 2014). Patients interpret their early symptoms as a minor condition and do not consider it as requiring immediate attention. Patients use various coping strategies like self-remedy, self-medication, seeking traditional healers etc. that cause late detection of cancer due to delayed presentation with the symptoms at hospitals. (Azhar and Doss, 2018; Broom et al, 2009). In 2014, close to 70% of cancer patients in India died either due to lack of financial resources or due to absence of awareness of disease (Dhillon et al, 2018; Pradhan et al, 2018; Tiwari et al, 2015).

Intra-household resource allocation have revealed that women are particularly discriminated against due to the lower social position accorded to them in a patriarchal society. Due to gender discrimination in India women and men have unequal access to health care facilities at different stages of the life-cycle (Kurz et al 1997, Pande 2003, Asfaw et. al. 2007, Singh and Parasuraman 2014, Aurino, 2016 and others). Moreover, the role of stigma related to

particularly breast and cervical cancers has been found to be very important. Stigma is a feared outcome of a cancer diagnosis and described as a barrier to screening, early diagnosis and treatment seeking for women with symptoms. Stigma is manifested through fear of casual transmission of cancer; personal responsibility for having caused cancer, and; belief in and fear of the inevitability of disability and death with a cancer diagnosis (Nyblade et al, 2017; Sheikh and Ogden, 1998; Kishore et al, 2008; O'Mahony et al, 2011).

Gendered dimension of intra-household decision-making

All the major international policy frameworks on gender equality, women's empowerment, and indeed on development more broadly, recognize the importance of power and decision-making for enabling women to become equal actors in society, with equal access to resources and equal possibilities to fulfil their potential. Gender inequality in the distribution of power within households leads to women being disadvantaged economically, not only in terms of their immediate access to resources, but also in their ability to pursue opportunities outside the home –due to lack of time,competing demands arising from the demands of unpaid care (which can be associated with limited power in reproductive decision-making),lack of power to decide on whether, when or where to work, and circumscribed choices in education and training. Disempowerement within the household often translates in inappropriate health seeking behaviour and neglect of health concerns before progression to complications. Given this backdrop, the central concern of the study is to delve into the complex interplay of a woman's uptake of screening tests (namely PAP smear test and mammogram) and her participation in intra-household decision making, which is a proxy of her level of empowerment and agency within the family.

Data

The analysis would be done using the wave-1 data of Longitudinal Ageing Survey of India conducted during 2017-18. The LASI is a nationally representative large-scale sample survey that interviewed 72,250 older adults (30569 males and 41681 females) aged 45 and above across all states and union territories of India and collected data on the burden of disease, functional health, healthcare, and the social and economic wellbeing of older adults. In addition, in the LASI female participants age 45-59 were asked about their reproductive health conditions, including menstrual, menopausal, or gynaecological health concerns. These questions covered menstrual bleeding and reproductive health problems in the last 12 months, and whether treatment was taken for these problems. Information on hysterectomy and reason

for hysterectomy was also collected. Additionally, information was collected on screening tests, such as pap smear for cervical cancer and mammography for breast cancer, in the past two years prior to the survey.

Variables

Outcome variables- PAP smear test is used to screen for cervical cancer at an early stage, but can detect other gynaecologic problems as well. A mammography is a special X-ray of the breasts that allows for lumps to be detected, which can help detect breast cancer at an early stage. The dependent variables are defined as follows:

- 'In the last 2 years, have you had a PAP smear test?'- coded 0 if no, 1 if yes
- 'In the last 2 years, have you had a mammogram?'- coded 0 if no, 1 if yes

Predictor variables- Two proxies of level of empowerment of women with respect to participation in intra-household decision making are defined as follows:

- Role decisions regarding 'buying and selling of property' – categorised as no role, decide alone, contribute jointly with other household members.
- Involvement in 'payment of bills and settling of financial matters'- categorised as yes or no.

Covariates- Four broad domains of covariates have been identified that may induce inequalities in preventive health-care utilization (i.e. uptake of cancer screening practices). These domains pertain to sets of demographic factors, socio-economic factors, social support/ institutional factors and geographical factors.

Methods

Bivariate percentage distribution (cross-tabulation) will be calculated to estimate the differentials in the uptake of cancer screening practices by predictor variables. The results will be tested for statistical significance by using Pearson's Chi-squared test for homogeneity or independence. The sample data will be weighted to reflect the structure of Indian population using the formula provided in the report of the LASI (2017-18).

Two binary logistic models are proposed to capture the crude and the adjusted association between uptake of cancer screening practices and a woman's role in 'intra-household decision making. The model on adjusted association between uptake of cancer screening practices and a woman's role in 'buying and selling of property' and involvement in 'payment of bills and

settling of financial matters'will control for a vector of demographic, socio-economic status (SES), social support, institutional and regional variables. To further examine the complex interplay of these variables in determining the magnitude and direction of uptake of cancer screening practices, interaction terms between empowerment indicators and other covariates will be created and controlled for in the models. The results will be presented as crude (cOR) and adjusted odds ratios (aOR) with 95% confidence intervals (CI).

Expected findings

The findings of the study are expected to suggest a disadvantage among women with no role in intra-household decision making with a lower uptake of cancer screening tests, thus, flagging the importance of the influence of women's empowerment and agency in preventive health care utilisation. The study is also expected to affirm the applicability of the social gradient hypothesis with findings suggesting that the level of women's role in intra-household decision making is distributed along the social gradients.

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