



Inequalities in cervical cancer screening utilisation and results: A comparison between Italian natives and immigrants from disadvantaged countries



Federica Gallo*, Adele Caprioglio, Roberta Castagno, Guglielmo Ronco, Nereo Segnan, Livia Giordano

CPO Piemonte, Centre for Cancer Prevention, Unit of Epidemiology, Screening and Cancer Registry, AOU Città della Salute e della Scienza, Turin, Italy

ARTICLE INFO

Article history:

Received 7 September 2016

Received in revised form 4 January 2017

Accepted 3 August 2017

Keywords:

Immigrants

Mass screening

Cervical cancer

Demographic factors

Screening outcomes

ABSTRACT

Cervical cancer screening underutilisation is documented among immigrants from poor countries and it is associated to an augmented risk for severe lesions. In a cohort of 1,410,364 Italian women and 200,491 immigrants from poor countries differences in screening participation and results were investigated. Participation rate was lower for immigrants than for Italians: 43.98% versus 48.59% ($\chi^2(1): p < 0.001$). This gap increased with age ($\text{ptrend} < 0.0001$). Some socio-demographic factors negatively influenced immigrants' participation. Illiteracy (OR = 0.75) versus secondary school, being single (OR = 0.71) versus attached, first screens (OR = 0.67) versus subsequent ones. Although the interaction between educational and professional levels showed that graduated immigrant women conducting an intellectual job have a higher inclination towards screening than their Italian peers (OR = 1.43 vs OR = 1.04). The Standardised Detection Ratio (SDR) suggested a frequency of severe lesions nearly double among immigrants in first screens (SDR = 1.94; 95% CI: 1.82–2.08) and even higher (SDR = 2.53; 95% CI: 2.35–2.73) for Central/Eastern Europeans. Multi-component interventions involving both patients and providers offer the greatest potential to increase cervical cancer screening uptake within foreign-born populations. So immigrant-specific interventions are needed for some immigrant groups, like Central/Eastern Europeans who are at higher risk of cervical lesions and, together with Asians and Africans, showed a poor attitude towards cancer prevention.

© 2017 Elsevier B.V. All rights reserved.

1. Introduction

According to national Italian population data [1] residents with non-Italian citizenship increased nearly fourfold in recent years: from 1,300,000 in 2001 to over 5,000,000 in 2015 and immigrant integration studies are a developing field as Italy emerged as a receiving country in the late 1970s [2].

In Piedmont, a Northern Italian region, resident female immigrants represented 10% (225,096) of the female population in 2015. In addition 153,779 (68.3%) were 25–64 year-old and so potentially beneficiaries of cervical cancer screening [3]. Turin with

about 1,000,000 inhabitants is the main urban core and about 40% (172,299) of immigrants to Piedmont live in its metropolitan area.

When assessing organised screening programmes for female cancers questioning if messages on possible benefits deriving from early detection reach and motivate immigrant women is becoming increasingly important. This is a relevant aspect of cervical cancer screening organisation as underutilisation of screening programmes is well documented among immigrants, especially when coming from countries with low-middle-income economies [4–6]. Socio-economic factors are strongly associated with the use of preventive health facilities [7–10]. Low health educational level [8], age class [11,12], ethnic origin and behavioural features [8,13] can represent barriers to cancer prevention. These barriers are particularly resilient among immigrants, as they are reinforced by lack of awareness of cancer together with myths and misconception about the disease [4,14,15]. Whereas literature evaluating the impact of cancer screening organisation on immigrants compliance is scarce, even if some studies showed that some socio-cultural subgroups

* Corresponding author at: CPO Piemonte, Centre for Cancer Prevention, Unit of Epidemiology, Screening and Cancer Registry, AOU Città della Salute e della Scienza di Torino, Via Cavour 31, 10123, Turin, Italy.

E-mail addresses: federica.gallo@cpo.it (F. Gallo), adele.caprioglio@cpo.it (A. Caprioglio), roberta.castagno@cpo.it (R. Castagno), guglielmo.ronco@cpo.it (G. Ronco), nereo.segnan@cpo.it (N. Segnan), livia.giordano@cpo.it (L. Giordano).

prefer a female smear-taker [16,17] and that distance to screening site could predict non-adherence [18] but with a small effect.

Low participation in screening practices by immigrants women can result in real health inequalities. Indeed cervical cancer is preventable through early diagnosis and treatment of pre-cancerous lesions and organised screening programmes can reduce its incidence and mortality [19,20]. Numerous studies showed that immigrant women from Low and Middle Income Countries have a higher risk of cancer or high-grade lesions when compared to natives [21–23]. Moreover, some studies conducted on women immigrated to Italy showed that a high burden of Human Papillomavirus (HPV) infection positively correlates with a high incidence of cervical cancer [24–26].

The aims of this study were hence: 1) to detect differences among Italian women and immigrants from countries with high-income economies compared to immigrants from non-advanced countries invited to the Piedmont cervical cancer screening programme in terms of participation and cervical severe lesions Detection Rate (DR), and 2) to quantitatively analyse the association of socio-demographic factors with access to cervical cancer screening preventive tests in these two groups of women.

2. Materials and methods

2.1. Participants and data collection

The study cohort consisted of 25–64 year-old women – both Italians and foreigners – resident in Piedmont and who received at least one invitation to a cervical cancer screening test within the local programme during the period 2001–2013. Within the programme all resident women aged 25–64 and registered within the Italian National Health Service receive an invitation letter with a prefixed appointment to perform a Pap-test in a family planning. Women can change the scheduled appointment contacting a call centre. Together with the invitation letter women receive a leaflet summarising the screening path and what the screening test consists of; both texts are in Italian only. There are 128 screening units widespread in the Piedmont Region. Smears are taken by trained female midwives, but this is not specified in the leaflet. After Pap-test performing the collected cells are sent to a centralised laboratory for cytological analysis. If the test is negative women are re-invited to screening after three years. If abnormal cells are detected women are invited to further assessment (colposcopy and eventual biopsy) and directed to therapeutic channel and follow-up, when needed. For each woman, the complete screening path is recorded at centralised level. So the cohort screening history and some census data were recorded into the screening programme archives during the entire study period, through a dedicated software.

In 2006–2007 to facilitate screening participation among female immigrants a multilingual informative campaign was implemented throughout the Piedmont Region. The action consisted in tailoring communication strategies on immigrants' needs through a reworked and simplified version of the existent informative material. So booklets and posters were translated into the eight most common languages among the local immigrant communities (Romanian, Russian, Arabic, Albanian, Chinese, English, French and Spanish) and were distributed and affixed at family planning clinics, General Practitioners' premises, chemists' shops, multicultural centres, associations for immigrants, and public transport lines.

Immigrants were identified either through citizenship, for Turin residents, or through State of birth, as classified by the Italian National Institute of Statistics [1], for residents in the rest of Piedmont. For Turin residents an agreement analysis between place of birth and citizenship was conducted – through the Cohen's

Kappa coefficient – as the double codification was available. Foreign women were labelled as coming from High Income Countries (HIC) or from Low and Middle Income Countries (LMIC). This countries partition was made according to the 2006 World Bank Classification based on Gross National Income per capita [27].

Foreigners from HIC were included into the HIC group together with Italian women, as all these countries have a high socio-economical level. HIC women were stratified into two sub-groups: Italy and other HIC countries.

All other immigrants were included into the LMIC group and were sub-stratified into five geographical areas: Africa, Asia, Central/Eastern Europe, Central/South America and the Caribbean + South Western Pacific (the latter were included in this sub-group because of their limited number).

2.2. Measures and statistical analyses

Differences in screening participation rate, colposcopy referral rate (proportion of invitations to colposcopy on the total number of Pap-tests) and compliance (proportion of colposcopy assessments on the total number of invitations to colposcopy) were investigated among HIC and LMIC women, both at aggregate level and by area of origin, using chi-square techniques. For these measures screening episodes were considered as units of observation, i.e. the time period elapsed between first and subsequent invitation (three years for negative women, three years after the end of treatment for positive ones). Women not attending the first invitation received a recall one month later, thus the participation rate was calculated considering attendees either at first appointment or at recall. Each woman contributed to the amount of invitations and of exams with a minimum of one episode to a maximum of four episodes.

To detect incidence of cervical cancer and of histologically confirmed cervical intraepithelial neoplasia grade 2 or higher (CIN2+) DR was calculated. DR was defined as the number of women with one lesion among 1000 performed Pap-tests. When women revealed repeated lesions the more severe or – in case of equal diagnoses – the oldest was selected. Crude DRs were calculated among LMIC and HIC women and Age-Specific Detection Rates (ASDRs) were calculated among the two groups in first and subsequent screens. To remove influence of different age structures among the LMIC and HIC group the Standardised Detection Ratio (SDR) and its Confidence Interval at 95% (95%CI) were estimated, through indirect standardisation using the HIC cohort as the standard population. SDR detail among Central/Eastern Europeans was also provided, as they represented the largest immigrant category.

For Turin residents only, some socio-demographic characteristics were available, thanks to individual record-linkage with the archives of the Turin Longitudinal Study, a health monitoring system based on censuses since 1971 [28]. Thus an in-depth analysis through a logistic regression model – with main effects – was conducted, using a backward procedure based on the Likelihood Ratio Test (LRT). In this model screening participation was considered as the outcome and the following variables were included as predictors:

- *marital status*: attached, unattached;
- *educational level*, assimilated to the Italian school system also for foreigners: academic degree or higher, high school diploma, secondary school licence, primary school licence, illiterate;
- *profession*, categorised according to the classification of the Italian National Institute of Statistics:¹ intellectual job, technical/office job, manual job, non-employed;
- *deprivation index*, which considers the average level of housing facility, family composition, education, and occupation in each census district and then matched to each woman in this analy-

Download English Version:

<https://daneshyari.com/en/article/5723303>

Download Persian Version:

<https://daneshyari.com/article/5723303>

[Daneshyari.com](https://daneshyari.com)