

First birth age and women's midyear metabolic risks

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Title

Association between age of first child birth and metabolic risks at midlife of women in South Korea

Question

To what extent the age of first childbirth has influenced on chronic disease prevalence among women's midlife in South Korea?

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Background

Having the lowest low fertility rate in the world that below 1.0 and entering into an aged society at an unprecedented pace, South Korea has been experiencing rapid social demographic changes yet there has been little known about its impacts. Although South Korean government has funded more than 120 trillion KRW over the last decade for pro-natalist policy yet the investment has scant impacts on the society. Therefore, rather than focusing on encouraging childbirth to tackle the current issues, this study tried to explore what should be known for the future.

Various reasons of decreasing TFR have been discussed and delaying childbirth has been widely

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mentioned as one of the alarming causes of TFR decline, particularly in economically developed countries. Delaying childbirth not only means childbearing period can be shortened but also indicates that the timing of the first child birth is deferred. Some researches uncover the impact of delayed first childbearing age in relation to maternal and infant health, yet they primarily focus on child-maternal care rather than see women's health. Given this circumstance, this studies tried to analyse whether the age at first birth has impact on women's health condition, particularly in midlife.

Methods

Women aged 50 in year 1992 to 2005 were drawn (n=79,478, mean age 25, median age 25). We first conduct analysis including women aged 15-49 yet there were not many of them from 15-19 and 46-49 so they were excluded for better outcomes (less than 1.5%). Participants who already had childbirth before 1995 were drawn and health check-up carried out every 2 years. Out of the long follow-up period, we collected health checkup data from age 50 to 54 (5 years). The main exposure was having experienced childbirth and main outcome was status having 3 risks out of 4 (high cholesterol, hypertension, diabetes mellitus, and obesity). Logistic regression was applied and quadratic form modelling were conducted to show best fit model to analyse the relationship.

Data

Korean Cancer Prevention Study (KCPS, designed and launched the project in 1992) was used. There has been insufficient longitudinal data so that long term follow up could not be achieved, yet this study is based on the advantage of acquiring the data.

Preliminary results

Logistic regression was applied and the coefficient was -0.3238 (0.0263). Yet since metabolic-related risk can be increasing as getting aged, we then carried out predicted probability model design using the same regression but in quadratic form and as the figure 1 shows, the risk will be decreasing from age 15 to 31-32 then it bounces to increase up to age 49.

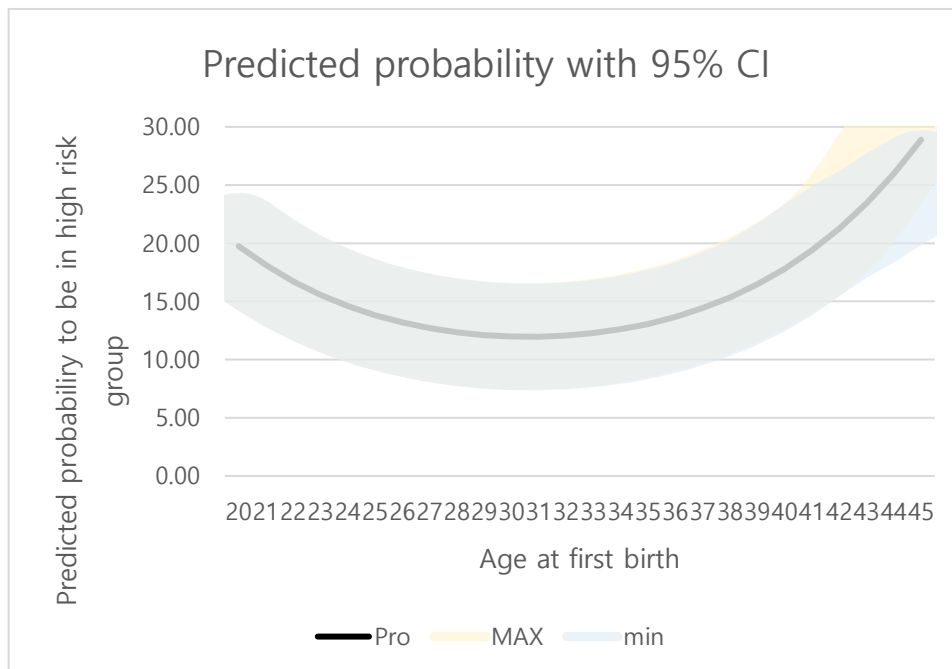


Figure 1. Predicted probability of age of childbirth and having metabolic risks in midlife

Discussion

Previous studies showed more and more women who particularly had advanced educational attainments and stable job positions tend to delay childbearing more. Considering the participants had childbirth before 1995, they are aged 64-77 as of 2019 which possibly means that women in their childbearing age in 2019 may delay further than the participants. As Korean government has spent astronomical amount of funds to encourage childbearing yet the impact has not come, accepting the social demographic changes and transforming policy settings as well as taking care of people who decided not to have a child or delay the moment need to begin. This study suggests neither delaying age at first birth has been persuaded by the government nor could be adjusted, this trend and likelihood of being at risk of ill health need to be considered for furthering healthcare service.