Critical Appraisal

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The available and some of the published data suggest that death rates due to prostate cancer are in higher frequency and it is higher in rural areas of the country instead of the urban areas but it is also true that this is not always the case. Until 1988 the mortality rates in both the urban and rural areas of New south whales were the same but then the rural excess to this disease became clear. So in this paper in order to determine whether there has been a difference in the urban and rural mortality trends the official Australian data on prostate cancer was examined starting from the year 1985-2002. Also, it is investigated in this paper what differences were there in rural-urban mortality rates of prostate cancer, radical prostatectomy and also prostate-specific antigen testing. While detecting and also treating the asymptomatic prostate cancer it will be quite normal to find out any geographical variations in the radical prostatectomy and also PSA testing. For instance in a recent seminar in Australia on informed choice on prostate cancer screening showed that the PSA screening in the rural men is much lower than the urban men (Coory & Baade, 2005, p.).

The justification and also the objective for conducting this research study was to find out that why prostate cancer is commonly present in men who are aged between 50-79 years and who are residing in the cities or urban areas as compared to those men who live in the rural area. So the main purpose of this research was to find out why prostate cancer is a growing concern among the urban areas as compared to the rural area. This study provides a comparison between the populations of both rural and urban Australia because till date no such clear evidence were present and even if some proofs were available they were not enough to draw a clear conclusion. Through this research, it became clear that the probability of a man having a PSA test and the management of the disease basically depends on where the person lives. Although in a descriptive study the cause or causes of prostate cancer cannot be established few radical prostatectomies in regional and other rural areas which is also associated with less PSA screening is one of the competing hypothesis till date. There are also some other possibilities which are related to the difference in management or maybe they are associated with access to urologists. For these studies statistical divisions were used which is also a component of the ASGC in order to define the capital city areas.

For a period of at least 20 years, the Statistical Divisions are designed in such a way that they contain all the anticipated development of the city. The research strategy that was used in this study was based on the evidence that the prostate cancer does not affect young men who were below the age of 50 years and the mortality rate in this group was lower as compared to the people who are above the age of 50 years, the analysis of the study was limited to all the men who were aged between 50-79 years and they always lived in the capital city SDs, a comparison was made of this group to all those men who were also in the same age range but they were living in the regional and rural areas of Australia. Data were obtained on death registrations and also populations from the ABS. As the data that was provided in this study was normally used by the public health surveillance, therefore, ethical approvals in this study were not required. As in the overall study, it was not clear whether the test was used to screen asymptomatic men or to monitor disease so the term PSA testing was used in this article rather than PSA screening. A previous report in which comparison was made with self-reported screening data and it was concluded on the basis of this data that most of the PSA testing which is currently done in Australia is for screening. By using the 2001 Australian population as standard the age-standardized methods for each of the outcome were measured. By means of Poisson regressions models, trends in rate ratios for mortality over time was evaluated. Although through this research it is clear that the mortality rates in a particular population are higher but in this research paper it is not explained that why the mortality rate in one population is higher as compared to the other and also why the prostate cancer is common in old people as compared to the younger generation.

This research paper covers the most important aspect that the death rates due to prostate cancer are higher in the rural population of Australia as compared to the urban area. After statistical analysis and by comparing the data with the previous data the hypothesis was proved that prostate cancer is higher in one population as compared to the other. But in the overall research paper, it was not explained why this difference is there and why prostate cancer only affects the older individuals. It is a fact that to find out answers of such questions it is important to do *in vivo* experiments but overall this research study provides a basis that prostate cancer is somehow localized in one population and also in one specific age group.

**References**

Coory, M. D., & Baade, P. D. (2005). Urban-rural differences in prostate cancer mortality, radical prostatectomy and prostate-specific antigen testing in Australia. *Medical Journal of Australia*, *182*(3), 112–115. https://doi.org/10.5694/j.1326-5377.2005.tb06609.x