**Topic - An early detection and skin cancer prevention for firefighters in the workplace.**

 Using the Quality Assessment of Community Evidence Tool (TOOL A) I have an improved perspective of strategies to assess the quality of data in a study by Bigert et al., (2020). This tool is flexible and adaptable to various types of study designs, and overall is intended to support readers to improve their critical analysis of a research study in the context of how it may inform project or public health decision making (National Collaborating Centre for Methods and Tools, 2020). Evaluating a study using either Tool A or Tool B helps the reader to identify gaps in the study, understand any study limitations as well as evaluate if and how the evidence may influence decision making (National Collaborating Centre for Methods and Tools, 2020).

In this cohort study, Bigert et al., aimed to understand if firefighters in Sweden had increased likelihood for cancer than the general public (2020). They used population health data from the Nordic Occupational Cancer (NOCCA) project, which included the data of over 6 million participants from between 1961 and 2009. Among this population, data of 8136 firefighters was identified.

As guided by the QACE Tool A, this study is meaningful and transferable to my proposed project. However, because the data is coming from a different country (Sweden) and should look for further data or sources to potentially understand any regional differences between firefighters that be relevant such as legislation and policies that may impact occupational skin cancer risk. The study by Bigert et al., is moderately trustworthy; a major positive is that the sample size is large, however, limits in the data collection source are that it was not able to differentiate between cancer incidence related to lifestyle factors, as well as the possibility of overestimating years of service because it is unknown how many of the participants labeled as "firefighters" shifted from frontline fire suppression exposure to office administration work. With respect to equity -informed, this study has high overall representation (>8000 firefighters) and was collected through ethical means (e.g. census data and a cancer registry). However, includes no representation by women. The methods report that only 15 women were identified in the data collection and were excluded because authors state that the sample size of women was too small for analysis. It is unclear in the methods why so few women were identified; whether women in firefighting is that low or other reasons for exclusion.

Overall, this activity was helpful for me to see the different factors that I may consider when reviewing a research article. In all honesty, the section on equity-informed is something in particular that I have not always paid close attention to when critically evaluating research and will certainly something that I will heed closer attention to moving forward.

**References**

Bigert, C., Martinsen, J. I., Gustavsson, P., & Sparén, P. (2020). Cancer incidence among Swedish firefighters: an extended follow-up of the NOCCA study. *International Archives of Occupational and Environmental Health*, *93*(2), 197–204. <https://doi.org/10.1007/s00420-019-01472-x>

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