what was the excess death rate in sweden during the covid pandemic compared with other scandinavian countries?

The excess death rate in Sweden during the COVID-19 pandemic was notably higher compared to other Scandinavian countries. Here is a summary of the findings:

* **Sweden's Excess Mortality**: Sweden experienced significant excess mortality during the pandemic years 2020-2022. In 2020 alone, Sweden had a substantial increase in excess mortality, with 75 excess deaths per 100,000 population [6]. This trend of higher excess mortality continued into the following years, with Sweden showing more excess deaths in 2020 compared to 2021, unlike Finland, Norway, and Denmark, which had more excess deaths in 2021 [17].

* **Comparison with Other Scandinavian Countries**: Denmark, Finland, and Norway exhibited different patterns of excess mortality. For instance, while Sweden had significant excess mortality in 2020, Denmark, Finland, and Norway experienced higher excess mortality in 2022 [6]. The total excess deaths in Denmark, Finland, Norway, and Sweden during 2020-2021 were influenced by various factors, including different pandemic response policies [17].

* **Cause-Specific Analysis**: Besides direct COVID-19 deaths, Sweden and other Scandinavian countries also saw excess deaths due to cardiovascular diseases and a reduction in deaths from respiratory diseases other than COVID-19 and dementia. The excess mortality due to cardiovascular diseases was particularly pronounced in Finland and Norway in 2022, while the reduction in dementia deaths was notable in Sweden in 2021-2022 [17].

* **Overall Impact**: The overall excess mortality rates in Sweden were higher compared to its Scandinavian neighbors, which can be attributed to different approaches in handling the pandemic. For example, Sweden initially opted for less stringent measures compared to the strict lockdowns implemented in Norway [1].

These findings suggest that Sweden's approach to managing the pandemic, characterized by less strict initial measures, may have contributed to higher excess mortality rates compared to other Scandinavian countries that implemented more rigorous controls.

References:
[1] Zahl PH, Hemström Ö, Johansen R, Mamelund SE. Mortality in Norway and Sweden during the COVID-19 pandemic 2020-22: A comparative study. Journal of infection and public health.

Apr 2024;17(4):719-726. 10.1016/j.jiph.2023.10.033
[6] Forthun I, Madsen C, Emilsson L, Nilsson A, Kepp KP, Björk J, Vollset SE, Lallukka T, Skrindo Knudsen AK. Excess mortality in Denmark, Finland, Norway and Sweden during the COVID-19 pandemic 2020-2022. European journal of public health. Aug 01, 2024;34(4):737-743. 10.1093/eurpub/ckae091
[17] Nilsson A, Emilsson L, Kepp KP, Knudsen AKS, Forthun I, Madsen C, Björk J, Lallukka T. Cause-specific excess mortality in Denmark, Finland, Norway, and Sweden during the COVID-19 pandemic 2020-2022: a study using nationwide population data. European journal of epidemiology. Sep 2024;39(9):1037-1050. 10.1007/s10654-024-01154-0

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Please be aware that the insights provided by DietNerd may not fully take into consideration all potential medication interactions or pre-existing conditions.
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Citation Summaries

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Summary:

1. **Purpose** :

- **Objective** : The review seeks to compare COVID-19 mortality and excess mortality in Norway and Sweden during the pandemic years 2020-2022 to understand the impact of different mitigation strategies.
- **Methods** : Data on weekly COVID-19 related deaths and total deaths from 2015-2022 were collected from Statistics Norway and Statistics Sweden. Excess mortality rates were calculated using the mean number of deaths from 2015-2019 as a reference. Statistical analysis included rate ratios (RR) and adjustments for mortality displacement.

2. **Main Conclusions** :

- **Conclusions** : The study concludes that both COVID-19 related mortality and excess mortality rates provide biased estimates. Adjusting for biases, the mortality difference declined over time, with Sweden experiencing about 30% higher mortality compared to Norway after 30 months of the pandemic.
- **Implications** : This suggests that Norway’s stricter lockdown measures and subsequent management strategies potentially saved lives compared to Sweden's less stringent approach.

3. **Risks** :

- **Mentioned Risks** : The paper discusses the risk of bias in mortality data due to different methods of reporting and diagnosing COVID-19 deaths, as well as the potential underreporting of influenza as a cause of death during the pandemic.

4. **Benefits** :

- **Purported Benefits** : The study implies that Norway’s approach, which involved strict lockdowns and comprehensive tracking, potentially prevented around 2025 COVID-19 deaths compared to Sweden.

5. **Search Methodology and Scope**:
- **Search Strategy**: A search was conducted on OVID for articles published from March 1, 2020, to April 1, 2023, concerning COVID-19 and excess mortality in Norway and Sweden.
- **Scope**: The review included 51 articles, focusing on those that provided primary data on COVID-19 related deaths or excess mortality.

6. **Selection Criteria**:
- **Inclusion/Exclusion Criteria**: The review included studies that provided primary data on COVID-19 related deaths and excess mortality. It excluded studies that did not compare the countries directly or that did not cover the specified study period.
- **Diverse Perspectives**: The review appears to have a focused selection, potentially not incorporating studies with alternative methodologies or contradictory findings regarding the impact of COVID-19 mitigation strategies.

7. **Quality Assessment of Included Studies**:
- **Quality Assessment Methods**: The review utilized high-quality registry data and adjusted for various biases (mortality displacement and reporting biases), enhancing the reliability of the findings.

8. **Synthesis and Analysis**:
- **Synthesis Methodology**: The study synthesized findings using cumulative mortality data from official registries, adjusting for population growth and mortality trends.
- **Statistical Tests**: Rate ratios (RR) were calculated using Stata/SE 15.0. For example, the RR of COVID-19 related deaths in Sweden vs. Norway was 1.35 (95% CI: 1.31–1.39, $P < 0.0001$), indicating a significant difference.
- **Interpretation of Metrics**: A p-value < 0.0001 indicates a statistically significant difference at the 0.01% level, suggesting strong evidence against the null hypothesis of no difference between the countries.

9. **Sources of Funding or Conflict of Interest**:
- **Funding**: No specific funding source was mentioned for the study.
- **Conflict of Interest**: The authors declared no competing interests.

PMID: 38262870

PMCID: None

URL: https://pubmed.ncbi.nlm.nih.gov/38262870/

Citation: [6] Forthun I, Madsen C, Emilsson L, Nilsson A, Kepp KP, Björk J, Vollset SE, Lallukka T, Skrindo Knudsen AK. Excess mortality in Denmark, Finland, Norway and Sweden during the COVID-19 pandemic 2020-2022. European journal of public health. Aug 01, 2024;34(4):737-743. 10.1093/eurpub/ckae091

Summary:

1. **Purpose** : The review aims to compare weekly excess mortality in the Nordic countries (Denmark, Finland, Norway, Sweden) during the pandemic years 2020–2022, accounting for differences in population size and demographic distribution. Time series regression models were used to analyze weekly all-cause mortality data, standardized to the Danish population of 2020, using the decade 2010–2019 as a reference period.

2. **Main Conclusions** : The Nordic countries showed relatively low but varied pandemic-related excess mortality. Sweden experienced significant excess mortality in 2020, while Denmark, Finland, and Norway saw higher excess mortality in 2022. The timing and magnitude of excess mortality varied, highlighting the complex dynamics of pandemic mortality influenced by differing health policies and pandemic waves.

3. **Risks** : The paper does not explicitly discuss risks such as addiction or death beyond the context of COVID-19 related excess mortality.

4. **Benefits** : The study's benefits include providing detailed and region-specific insights into the impact of COVID-19, potentially aiding future pandemic preparedness and public health strategies.

5. **Search Methodology and Scope** : The study utilized high-quality, comparable administrative register data from each country, focusing on all-cause mortality. The scope is clearly defined, focusing on excess mortality during the COVID-19 pandemic across the Nordic countries, using robust time series regression models.

6. **Selection Criteria** : The review included weekly mortality data from official national registers, excluding Iceland due to unreliable estimates from small sample sizes. It focused on empirical, quantitative data from reliable sources, ensuring a high level of data comparability and quality.

7. **Quality Assessment of Included Studies** : The methodologies of the time series models were rigorously evaluated, with the fit tested against pre-pandemic data. Sensitivity analyses

were performed to test robustness, using different reference periods and comparing results from different models.

8. **Synthesis and Analysis** : Findings were synthesized using an ensemble of three time series models (ARIMA, STL-ETS, TBATS), weighted equally. Statistical analysis included calculating 95% prediction intervals and using Monte-Carlo simulations for validation. The ensemble approach allowed for a comprehensive analysis, balancing the strengths of each model to provide reliable estimates.

9. **Sources of Funding or Conflict of Interest** : Funded by the Swedish Research Council, Sweden's Innovation Agency, the Swedish Research Council for Health, Working Life and Welfare, and internal grants at Lund University. No conflicts of interest were declared, ensuring the objectivity of the findings.

PMID: 38758188

PMCID: PMC11293825

URL: https://pubmed.ncbi.nlm.nih.gov/38758188/

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