

A detailed architectural illustration of a clock tower, likely from a European city, featuring a large clock face and ornate stonework, positioned on the left side of the slide.

Gender Disparities in Online Visibility: Analyzing the Online Representation of Female Leadership in the Healthcare Sector Using AI-Driven Algorithms

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Table of Contents

1

Context

2

Methods

3

Results

4

Discussion

Context

Defintions

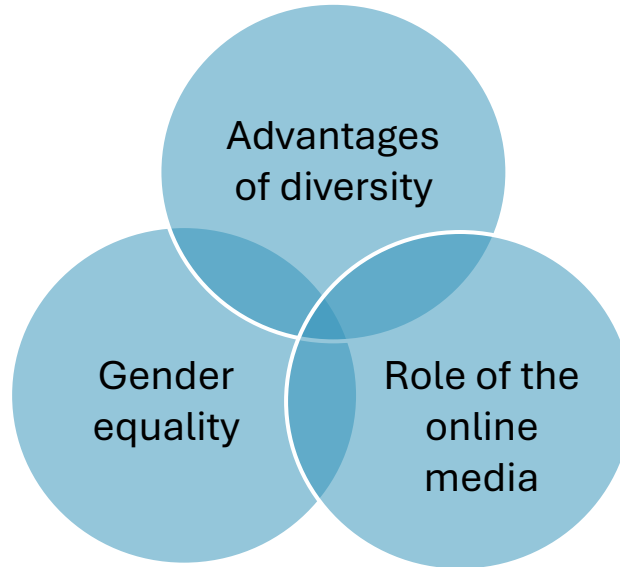
- **Female leadership** encompasses **women stepping into leadership positions** within organization, communities or governments
- Women influence **decisions**, drive **progress** and **motivate** others
- Emphasizes **gender diversity** by promoting **fair opportunities** and greater female representation

Source: Burel et al.
(2020)

Context

Scientific Context

- Diverse boards **boost performance**
- Diversity on boards **improves teamwork**



- Female Leadership visibility ensures **gender equality**
- Leadership should reflect **patient diversity**

- Digital world shapes **online leadership representation**
- **Gender biases** affect online communication

Source: Adams (2016), Khan et al. (2025), Nilizadeh et al. (2016), Paule & Yelin (2022), Sanni (2025)

Context

Problem and Relevance



- Women are **still underrepresented** in leadership positions
- **"confidence gap"** leads women to underestimate their abilities
- **Gender bias** and societal expectations limit the opportunities available to women
- **Women** make up **71% of the global health workforce**
- **online representation** of women leaders is essential for **inspiring** future generations in the **digital age**
- **Younger generations** are benefiting from the examples

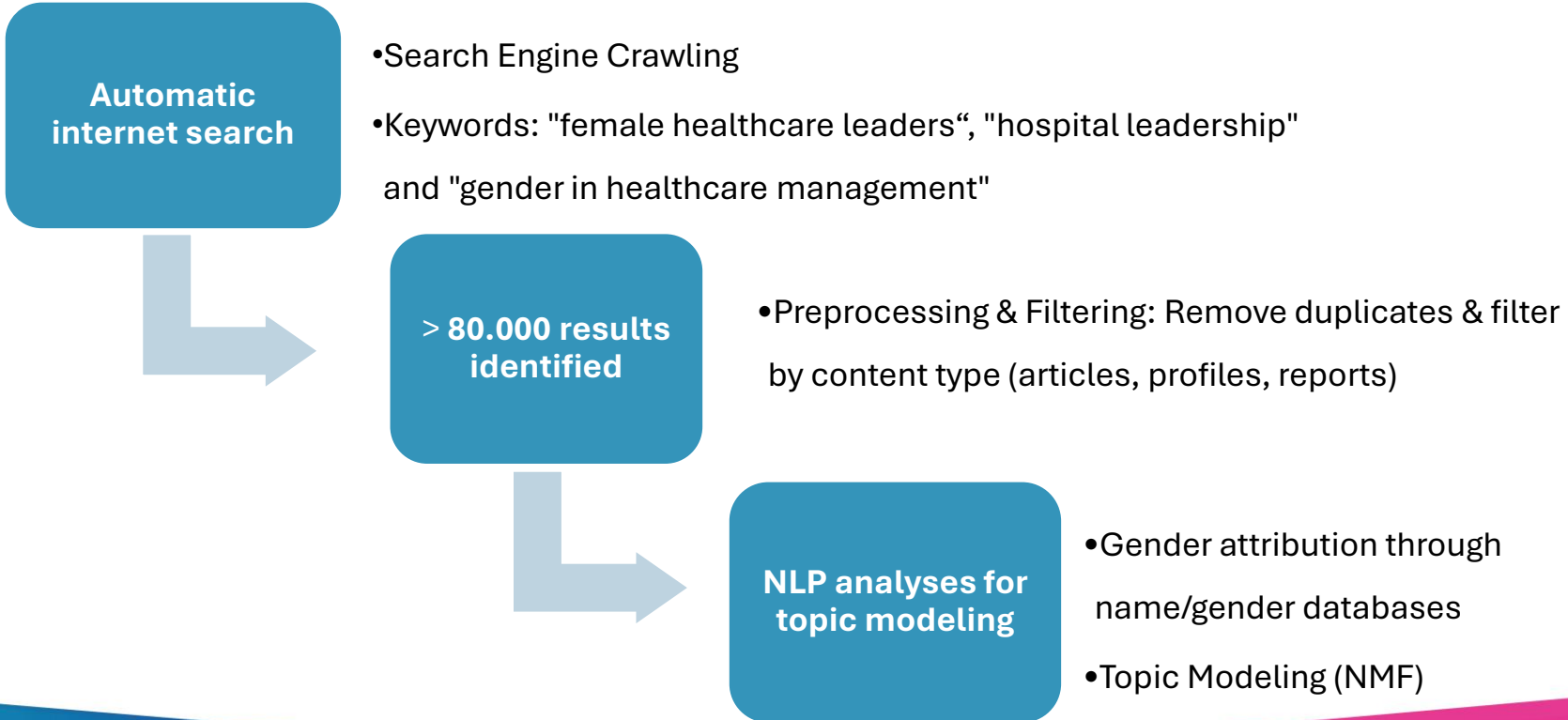
Source: De Rosa (2024), Paule & Yelin (2022), Mousa (2021)

Context

Research Question

“ How does the online representation of female leaders in the German healthcare sector differ from that of male leaders in terms of thematic emphasis and prominence in search engine results? ”

Methods



Results – Metadata

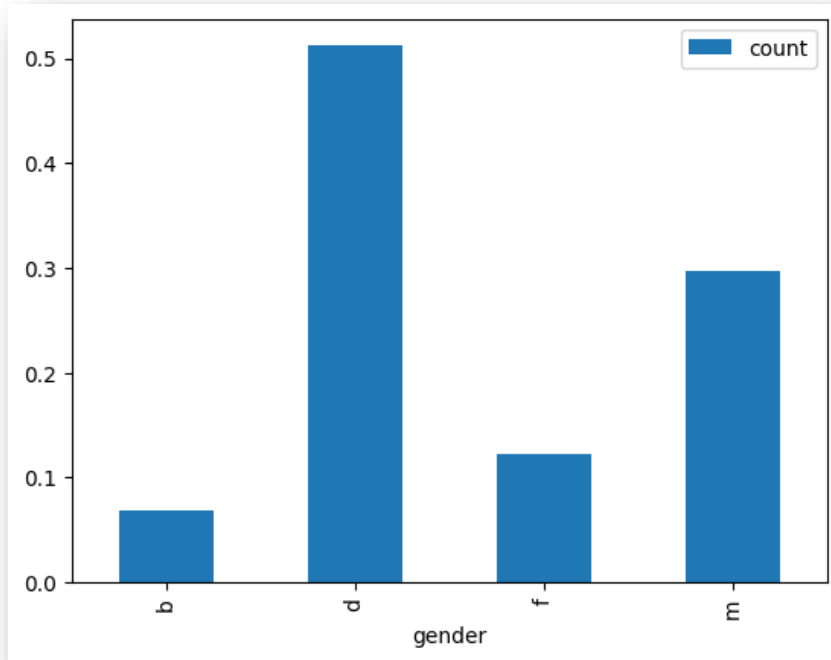
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id							
1	Biotech Chefin	803000.0	google	None	Biotech	None	Chefin
2	Biotech Chef	9700000.0	google	None	Biotech	None	Chef
3	Biotech divers Chefin	583000.0	google	None	Biotech	divers	Chefin
4	Biotech divers Chef	5540000.0	google	None	Biotech	divers	Chef
5	Biotech divers Führung	183000.0	google	None	Biotech	divers	Führung
...

→ ~ 3.300 automated searches via Google / DuckDuckGo

→ ~81.000 search results

domain	url
de.wikipedia.org	1548
de.statista.com	1192
link.springer.com	1098
www.handelsblatt.com	868
www.manager-magazin.de	703
www.pwc.de	689
www.apotheker-adhoc.de	659
www.faz.net	603
www.aerzteblatt.de	546
www.bvmed.de	539
www.vfa.de	533
de.indeed.com	524
www.pharmazeutische-zeitung.de	493
www.duden.de	444
www.spectaris.de	431
www.aerztezeitung.de	420
www.sueddeutsche.de	406
de.linkedin.com	403
www.spiegel.de	402
www.deutsche-apotheker-zeitung.de	401

More than double: male vs. female leadership visibility online



→ visibility of gender specific leader-related content:

Gender appearance	
neutral / divers	51,1%
male	30,1%
female	12,1%
both	6,7%



focus of topic modelling male leader-content:

- **Positioning within power structures** → frequent references to health and industry policy & high-level positions
- **Focus on status and credentials** → emphasis on salary, academic title (PhD), achievements



Results

- Significant **imbalance** in visibility of female leaders compared to male leaders
- Female leaders **less frequently featured** in prominent search engine positions
- Content of female leaders emphasizes **personal traits and challenges** over professional achievements or strategic decisions
- Male leaders appeared more often in industry reports and news articles discussing their leadership role and organizational impact



Limitations

- Focus on the **German healthcare sector** → **future research: multilingual searches & country differences**
- **Offline representation** of female leaders not considered
- **Visibility versus impact** – visibility does not reflect the impact of female leaders
- only snippets were analyzed → future research: in depth-analyses of actual websites

Conclusion

Significant
visibility gap

Underrepresentation of
female leaders in online
results

Content
disparities

Focus on traits and
challenges of female leaders

Impact on
perception

Visibility gaps may
reinforce stereotypes and
limit influence



THANK YOU



Prof. Dr. Vera Antonia Büchner

Professor Health Care
Management

Prof. Dr. Stefanie Scholz

Professor for Data Science in
Social Economy



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WWW.EHMACONFERENCE.ORG

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Context

today and the future

- Women are **still underrepresented** in leadership positions
- **Gender bias** and societal expectations limit the opportunities available to women

in the future

- 
- A horizontal blue line with an arrow pointing to the right. A vertical blue line intersects it, dividing the timeline into a past section and a future section. The text "in the future" is positioned above the vertical line.
- Momentum for women in management positions continues to increase
 - Programs designed to mentor and promote women leaders
 - Younger generations are benefiting from the examples
 - Modern feminism shape the future of women in leadership

Source: Paule (2022)

Context



- **Leads need visibility** in order to share their ideas, visions and successes with audience
- Progress has been made in advancing female leadership
- **Women** make up **71% of the global health workforce** and 59% of recent health science graduates
 - yet men hold 75% of leadership positions
- In the **digital age** ensuring women leaders are equally **represented online is essential for inspiring** future generations

This Research analyses the visibility of female leadership in the German healthcare and how they are represented online.

Source: Mousa et al. (2021), Paule (2022)



Context

Problem and Relevance

- Women are **still underrepresented** in leadership positions
- **Gender bias** and societal expectations limit the opportunities available to women
- **Women** make up **71% of the global health workforce**
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Source: De Rosa (2024), Paule & Yelin (2022), Mousa (2021)

Discussion



- **Gender imbalance** in the digital portrayal of female leaders
- **Limited visibility** may reinforce **stereotypes** and hinder impact
- Greater **focus on promoting female leaders** in healthcare is crucial
- *[one sentence on limitations]*
- **Further research** necessary **explore strategies to enhance visibility**