

# Harmful Anti-Foreign Sentiments based on Concern for Competition Should be Recognized and Addressed\*

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## Abstract

Globalization, immigration, and asylum seeking is a common topic of discussion, one which most people hold some personal opinion on accompanied by certain justifications. This paper analyzes data on what proportion of non-immigrant German men are likely to perceive refugees as threats to finding a romantic partner relative to the male-to-female ratio within their municipality and which of them support sentiments of anti-refugee violence. Results show that there can be argued an effect of these sentiments on actual rates of hate crime. We apply secondary research regarding Canadian rates of immigration and gender imbalances and raise concerns regarding the possibly generalizable nature of the findings in Germany. As this issue specifically affects minority groups experiencing prejudice and even furthers their marginalization, we place great emphasis on the weight of this discussion and propose that it should be considered to inform policies or initiatives intending to address racism and hate crimes, especially in breaking down the framing of refugees as a threat to non-immigrants, whether that's through education, public messaging, or other implementations.

## 1 Introduction

In Canada, hate crimes based on race and ethnicity increased by 80% in 2020, with the highest number of incidents targeting black individuals, followed by east and southeast Asians, indigenous individuals, and the lowest number of victims being South Asian individuals (Moreau and Wang 2022). Seeing that Canada is one of the most diverse countries in the world, welcoming 405,999 permanent immigrants in 2021 and 130,125 refugees in 2020, these statistics concerning the increase of hate crimes pose a real and visceral threat to a large proportion of Canadian residents (“2022 Annual Report to Parliament on Immigration” 2022).

There are many factors that contribute to the increase in hate crimes in Canada. However, with the rise of far-right discourse in the United States, anti-immigrant and anti-refugee rhetoric is becoming more prevalent in Canada. These negative attitudes and actions towards immigrants, refugees, and marginalized individuals can be the result of various structural and personal factors, including increased competition in the job and housing markets, resource scarcity, misguided beliefs about crime rates, illness, welfare dependency, and fears of losing national identity. Despite this, one factor that has received little attention until recently is the impact of competition in dating and marriage markets. A 2021 paper by Dancygier, Egami, Jamal, and Rischke published in the American Journal of Political Science delves into this important and often-overlooked area of research (Dancygier et al. 2021).

«««< HEAD In studying the opinions of German males living in municipalities with excess male populations, they find that a portion of non-immigrant German men hold the belief that refugees pose a threat to their ability to pursue German women (Dancygier et al. 2021). This population of individuals, non-immigrant

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\*Code and data are available at: <https://github.com/jj-andj/mate-comp-hate> ; Replication on Social Science Reproduction platform available at: <https://doi.org/10.48152/ssrp-qg85-cb34>

German males in highly male populated municipalities being the estimand of the study. Their finding suggests that hate crimes increase where non-immigrant German men are disadvantaged in their local dating markets (Dancygier et al. 2021). Using ecological evidence and originally curated survey data, the paper concludes that competition in dating and marriage markets where men outnumber women increases anti-refugee sentiments and violence [Dancygier et al. (2021). ===== In studying the opinions of German males living in municipalities with excess male populations, they find that a portion of non-immigrant German men hold the belief that refugees pose a threat to their ability to pursue German women (Dancygier et al. 2021). This population of individuals, non-immigrant German males in highly male populated municipalities being the estimand of the study. Their finding suggests that hate crimes increase where non-immigrant German men are disadvantaged in their local dating markets (Dancygier et al. 2021). Using ecological evidence and originally curated survey data, the paper concludes that competition in dating and marriage markets where men outnumber women increases anti-refugee sentiments and violence (Dancygier et al. 2021). »»»> 2b027ee74547997444f962b48ac48a3400e8376a

Our paper will follow a reproduction of Dancygier, Egami, Jamal, and Rischke’s findings and apply a Canadian-facing lens to discuss its implications on local Canadian populations and increased anti-refugee/immigrant sentiments and violence. Our paper seeks to address the two following research claims, (1) Non-immigrant German men who live in municipalities with excess male populations are more likely to perceive refugees as threats and (2) Non-immigrant German men who perceive mate competition are more likely to support violence as the only means to gain the attention of German politicians. Our reproduction was conducted using the statistical programming language R (R Core Team 2020). To further enable our analysis we employed the use of the following packages: readr (Wickham, Hester, and Bryan 2023), here (Müller 2020), readstata13 (Garbuszus and Jeworutzki 2021), MASS (Venables and Ripley 2002), sandwich [sandwich], lmttest (Zeileis and Hothorn 2002), dplyr (Wickham et al. 2022), tidyverse (Wickham et al. 2019), jtools (Long 2022), huxtable (Hugh-Jones 2022), list (Blair and Imai 2010), knitr (Xie 2014), kableExtra [Zhu (2021).

We will first discuss \_\_\_\_\_ INSERT FORMT HERE \_\_\_\_\_

## 2 Data

### 2.1 Source

The paper used for replication is from the American Journal of Political Science which follows a discussion on the correlation of perceived mate competition and its contributions to anti-refugee sentiments and higher crime rates in Germany (cite paper). Our reproduction seeks to address two claims made from the original paper and apply a Canadian facing lens. The two claims are as follows: (1) Are non-immigrant German men who live in municipalities with excess male populations more likely to perceive refugees as threats? (2) Are non-immigrant German men who perceive mate competition more likely to support violence as the only means to gain the attention of German politicians? To collect this data, the original paper uses four waves of online survey data collected in Germany that are representative of gender, age and state (geographic location) (Dancygier et al. 2021).

### 2.2 Methodology

This paper will replicate the survey data that was originally collected for the 2021 paper by Dancygier, Egami, Jamal, and Rischkes, as previously mentioned. Using the online survey platform “Respondi”, they conduct four waves of surveys which spanned from September 2016 to December 2017 (Dancygier et al. 2021). The researchers suggest that the anonymity provided by the online survey platform resulted in respondents answering more truthfully. (Dancygier et al. 2021). To mitigate potential biases, the researchers employed list experiments in Waves 1 and 2, and in Wave 2, they randomly assigned 50% of the sample to either a control or treatment group. The treatment group was exposed to statements concerning their agreement with

using violence against refugees as a means to get the attention of German politicians. However, no evidence was found to suggest that respondents were concealing their support for hate crimes when comparing the means of the control and treatment groups (Dancygier et al. 2021).

## 2.3 Features

The original survey data assessed participants on 53 variables, being representative of gender, age and state. The range of recorded age data from the survey occurs from 19-89 years old. Age was then categorized by group which is as follows: 18-29, 30-39, 30-49, 50-59, and 60 and older. Both male and female participants took part in the survey, but females were only involved in the second and fourth waves of surveys. The survey was distributed across 16 German states. Our reproduction, however, included removing variables that were not utilized in our final reproduction analysis and included only the necessary Waves 2 and 4. As a part of our reproduction, we also simplified the names of variables to make them easier to work with. From the original data, each variable correlates with a survey question asked to participants. To discuss the variables used in our reproduction I have grouped them in the following way and have listed each variable below.

### Socio-demographics

- Age Group
- Gender
- State
- German Citizen
- Marital Status
- Relationship status, single
- Religious Affiliation
- Education
- Occupation
- Income
- Household Size
- Subjective Social Status
- Male population: determining states with access to males by dividing the number of women by men aged 14 and 44 for each municipality
- Politics: left and right-leaning
- Politics: affiliated parties

### Mate Competition: using a scale of agree or disagree

- Does the influx of male refugees make it difficult for non-immigrant german men to find female partners
- Job Competition: using a scale of agree or disagree
- The inflow of young male refugees make it more difficult for young non-immigrant German men to find work/ jobs

### Life Satisfaction: scale of 0-10

- Satisfaction with life

### Encountering Refugees

- How many KM is the closest refugee reception center from your home
- How many refugees do you believe have settled in your municipality in the last year

- In the last month, how many refugees have you encountered in the following locations

Attitudes Toward Refugees (national and local scale): using a scale of agree or disagree

- Violence is sometimes the only means that citizens have to get the attention of German politicians - Attitudes towards Muslims
- Hostility against refugees is justified
- Politicians should condemn attacks against refugees
- Racist violence is defensible if it leads to fewer refugees settling in a town
- Attacks against refugee homes are sometimes necessary to make garner the attention of politicians
- Refugees are integrating well into Germany
- German refugees should be entitled to German citizenship
- The number of refugees should be reduced
- Refugees are receiving more than non-immigrant Germans
- Refugees should give up their culture to adopt that of Germany
- Refugees are good for the economy
- Refugees increase crime
- Increased refugees increase the risk of terrorism
- Will additional refugees in your town increase the influence of Islam (local)
- Will additional refugees in your town be a challenge for local schools (local)
- Will additional refugees in your town increase competition for housing (local)
- Will additional refugees in your town change the way of life in your town (local)

Operational category

- Experiment lists
- Treatment lists
- Outcome lists
- Waves: out of 4

### 3 Results

===== ##Figure 1 not including p value, percentage bar graph, detailed explanation of tercile meanings  
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Table 1: Dividing respondents into three terciles by their municipality's gender ratio

| Tercile     | Municipality's Male to Female Ratio |
|-------------|-------------------------------------|
| 1st Tercile | Less than 1.04                      |
| 2nd Tercile | More than 1.04, Less than 1.12      |
| 3rd Tercile | More than 1.12                      |

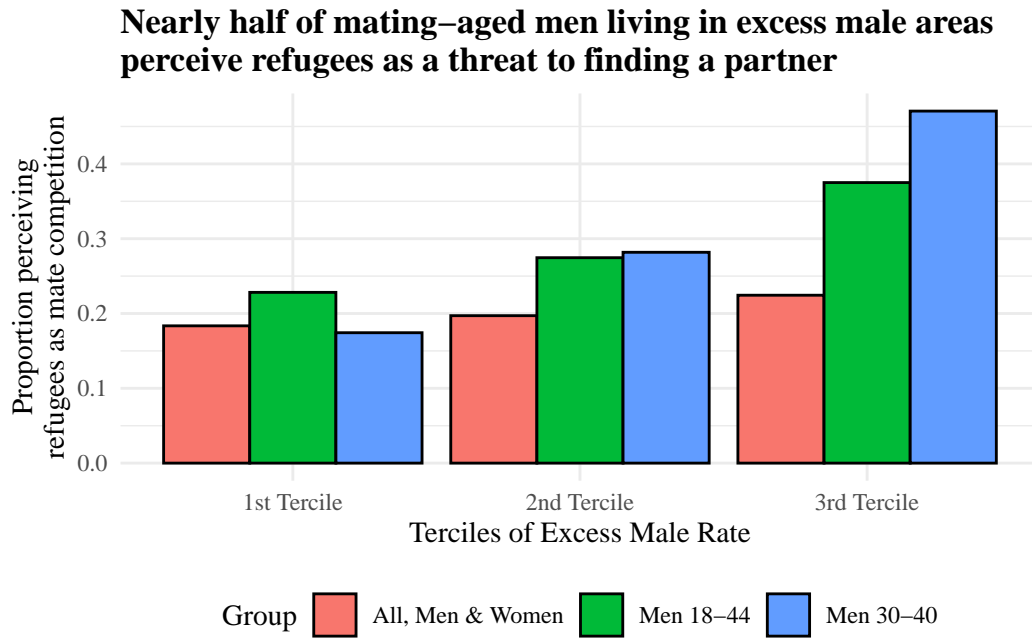


Figure 1: Proportion of respondents who see refugees as a mating threat by age group and tercile

Table 2: Statements used for surveying respondents

| Type              | Statement  |
|-------------------|--|
| <b>Only means</b> | When it comes to the refugee problem, violence is sometimes the only means that citizens have to get the attention of German politicians.  |
| <b>Message</b>    | Attacks against refugee homes are sometimes necessary to make it clear to politicians that we have a refugee problem.  |
| <b>Justified</b>  | Hostility against refugees is sometimes justified, even when it ends up in violence.   |
| <b>Prevent</b>    | Xenophobic acts of violence are defensible if they result in fewer refugees settling in town.  |
| <b>Condemn</b>    | Politicians should condemn attacks against refugees more forcefully. (For this statement, the results were reversed such that we are looking at respondents who Disagreed or Strongly Disagreed) |

## 4 Discussion

### 4.1 Findings

## 5 « « « < HEAD

In this paper, we have replicated the results found by Dancygier, Egami, Jamal, and Rischke. Their analysis sought to explore the correlation between perceived mate competition in municipalities with excess males and its contributions to anti-refugee sentiments and higher crime rates in Germany. Our paper has replicated two of their major claims.

- (1) Non-immigrant German men who live in municipalities with excess male populations are more likely to perceive refugees as threats
- (2) Non-immigrant German men who perceive mate competition are more likely to support violence as the only means to gain the attention of German politicians

By replicating their results, we hope to apply a Canadian-facing lens to gain insights into Canadian dating markets, the geographical distribution of males and females and their potential impacts on anti-refugee sentiments.

### 5.1 Alberta: Investigating its population ratio, dating markets and anti-refugee sentiments

To investigate the relevance of Dancygier, Egami, Jamal, and Rischke’s discoveries in a Canadian context, we will now explore Canada’s only Province with a higher ratio of males than females. Alberta is a Province in Canada with a total population of 4,543,111 individuals. It is the only Canadian Province that is more heavily populated by males, with a male population of 2,282,040 compared to 2,261,071 females, thus having a ratio of approximately 1.01, which is comparable to that of the 1st tercile in Figure 1 (cite stats 1). This means that

Table 3: Perceiving refugees as mate competition predicts support for hate crime

(a)

|                                    | Model 1                                       | Model 2                                       | Model 3                                       |
|------------------------------------|---|---|---|
| Mate competition                   | 0.388954021258191 ***<br>(0.0145502521315924) | 0.234463055537634 ***<br>(0.0180328697220162) | 0.209649334128798 ***<br>(0.0182866642763472) |
| Job competition                    |   | 0.242797369618408 ***<br>(0.0181376984925587) | 0.228877774924659 ***<br>(0.0183883958329611) |
| Life satisfaction                  |   | -0.0333776515996499 *<br>(0.0142614758807235) | -0.0308547572811113<br>(0.0157549163915511)   |
| Sociodemographics                  |   |   | X   |
| National attitudes toward refugees |   |   |   |
| Local attitudes toward refugees    |   |   |   |
| Additional controls                |   |   |   |
| N                                  | 3019  | 3019  | 3008  |
| R2                                 | 0.191496944608288                             | 0.240300197343161                             | 0.288264889594511                             |

(b)

|                                    | Model 4                                       | Model 5  | Model 6                                       |
|------------------------------------|---|--|---|
| Mate competition                   | 0.183273513474463 ***<br>(0.0171833389920075) | 0.164099823558722 ***<br>(0.0172882988473202)  | 0.137626497064367 ***<br>(0.0167588355706287) |
| Job competition                    | 0.0749936478139196 ***<br>(0.018940196237162) | 0.0631275039256767 ***<br>(0.0190445311910028) | 0.0542635065110621 **<br>(0.0183521654226738) |
| Life satisfaction                  | -0.00777875013768452<br>(0.0146927218423728)  | -0.00448858390914464<br>(0.0146338266554448)   | -0.000128152048344066<br>(0.0141114004380655) |
| Sociodemographics                  | X   | X  | X   |
| National attitudes toward refugees | X   | X  | X   |
| Local attitudes toward refugees    |   | X  | X   |
| Additional controls                |   |  | X   |
| N                                  | 3008  | 3008   | 3008  |
| R2                                 | 0.394249027379152                             | 0.409657634382106                              | 0.459150252350734                             |

*Note:*

All continuous predictors are mean-centered and scaled by 1 standard deviation. \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ .

**13% to 25% of respondents agree with statements supporting or not condemning violence against refugees**

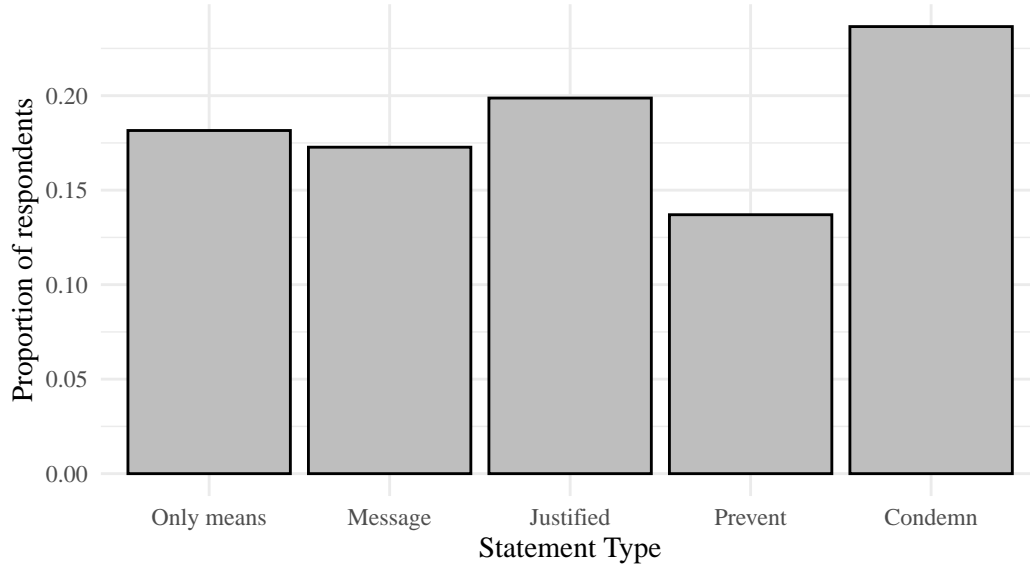


Figure 2: Proportion of respondents who agree with varying hate crime support statements

there are about 11,000 more men than women residing in this Province. Part of the population gap can be explained by age, as Alberta has a primarily young population, we typically see that as populations age they exhibit a higher female population (cite Edmonton journal). Its trades centric economy also attracts male migrants from across Canada (cite Edmonton journal). Concerning the original paper, Alberta's population growth can be largely attributed to international immigration which has typically brought equal numbers of both males and females (cite Edmonton journal). However, according to the 2021 census, 101, 650 more males are single (not married or living common law and never married) than women (cite statcan). Due to Alberta's young population, highly concentrated with men of working age, a comparison can be made to the term 'mating-aged' used in the original paper to describe higher tensions of dating competition. We thus believe that similar conditions for dating and marriage markets can be made between Alberta and the German municipalities of that the 1st Tercile from Figure 1. While population demographics are comparable between that of Alberta and the 1st tercile of German municipalities in the original paper, it is difficult to suggest that potential competition in Albertan dating and marriage markets correlates to anti-refugee sentiments and violence. However, in addressing Albertan immigrant and refugee statistics we will aim to illustrate how these patterns found in Germany can manifest in the context of Alberta. Based on the 2021-2022 Annual Population Report, Alberta welcomed 12,603 immigrants and 21,434 non-permanent residents, which include refugees (cite alberta.ca). While previous accounts have suggested that immigration has brought an equal number of males and females, it is safe to assume that Alberta is a growing population, subject to a population with a higher concentration of males (cite Edmonton journal). According to a 2018 paper, at the time 6 in 10 Canadians disagreed when asked if immigration levels were too high, with 35% believing that Canada accepts too many immigrants (cite the globe and mail). However, sentiments appear less than positive in Alberta, with Albertans expressing harsher attitudes towards immigrants and refugees (cite the globe and mail). 48% of Albertans at the time agreed that refugee claims are not filed from real refugees, with 62% stating that immigrants do not adopt Canadian values, about 10% higher than the national average of 51% (cite globe and mail). The globe and mail suggest that part of Alberta's higher anti-refugee attitudes can be attributed to its economy and fears of competition. We also see that in Dancygier, Egami, Jamal, and Rischke's paper, they find that in areas where men significantly outnumber women, there are higher levels of anti-refugee hate crimes (cite main paper). Based on these statistics, we believe that it is possible that Alberta can be experiencing a similar effect of anti-refugee sentiments in part as a result of