Research on the health of ethnic minorities and migrants: where do we go from here?

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Outline

• Equity: the Policy Practice Gap in Health

• Current knowledge insufficient to close this gap

• Rethinking directions in research
Illustrations from my ‘journey’ in research on health inequalities

• 25 years of research: in first instance focus on socio-economic inequalities in health; later also ethnic inequalities in health

• Our research group in Amsterdam focuses largely on
  – labour migrants and migrants from former colonies in high income countries
  – non-communicable diseases
  – quantitative studies

We deeply miss our colleague Marie-Louise Essink-Bot
What is the Policy Practice Gap in Health?

- **Policy** on migrant health: *equity* as a central value
  
  We strive for better health outcomes for all:
  “no one should be left behind” (WHO)

- **Practice**
  - Inequalities in health between ethnic minorities and host population
  - Increasing burden of disease in ethnic minorities

  Type 2 diabetes and depression as an example
Disparities in type 2 diabetes prevalence among ethnic minority groups resident in Europe: a systematic review and meta-analysis

Karlín A. C. Meeks¹ · Deivisson Freitas-Da-Silva¹ · Adebowale Adeyemo² · Erik J. A. J. Beune¹ · Pietro A. Modesti³ · Karien Stronks¹ · Mohammad H. Zafarmand¹ · Charles Agyemang¹

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Abstract Many ethnic minorities in Europe have a higher type 2 diabetes (T2D) prevalence than their host European populations. The risk size differs between ethnic groups, but the extent of the differences in the various ethnic minority groups has not yet been systematically quantified. All ethnic minority populations higher for women than for men except for SCA. Among SA subgroups, compared with Europeans, Bangladesh had the highest odds ratio of 6.2 (95 % CI 3.9–9.8), followed by Pakistani (5.4, 95 % CI 3.2–9.3) and Indians (4.1, 95 % CI 3.0–5.7). The risk of
Prevalence of diabetes 2-5 times increased among ethnic minority populations in Europe (European: reference)

Prevalence of type 2 diabetes between ethnic groups in Europe (1994-2014) - meta-analysis

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European origin</td>
<td>1.00 (Reference)</td>
</tr>
<tr>
<td>South Asian</td>
<td>3.70 (2.70, 5.10)</td>
</tr>
<tr>
<td>Middle Eastern and North African</td>
<td>2.70 (1.80, 3.90)</td>
</tr>
<tr>
<td>Sub-Saharan African</td>
<td>2.60 (2.00, 3.50)</td>
</tr>
<tr>
<td>Western Pacific</td>
<td>2.30 (1.20, 4.10)</td>
</tr>
<tr>
<td>South and Central American</td>
<td>1.30 (1.10, 1.60)</td>
</tr>
</tbody>
</table>

South Asian subgroups

- Bangladeshi: 6.20 (3.90, 9.80)
- Pakistani: 5.40 (3.20, 9.30)
- Indians: 4.10 (3.00, 5.70)

Coming decade: burden of diabetes in migrant populations will strongly increase

<table>
<thead>
<tr>
<th>Rank</th>
<th>Ethnic Dutch</th>
<th>Surinamese</th>
<th>Antillean</th>
<th>Moroccos</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>Ischaemic heart disease</td>
<td>29.9</td>
<td>30.8</td>
<td>20.2</td>
</tr>
<tr>
<td>2030</td>
<td>Ischaemic heart disease</td>
<td>31.8</td>
<td>48.8</td>
<td>32.5</td>
</tr>
<tr>
<td>2011</td>
<td>Cerebrovascular disease</td>
<td>14.6</td>
<td>23.4</td>
<td>11.1</td>
</tr>
<tr>
<td>2030</td>
<td>Cerebrovascular disease</td>
<td>16.8</td>
<td>40.0</td>
<td>23.5</td>
</tr>
<tr>
<td>2011</td>
<td>Alcohol use</td>
<td>12.0</td>
<td>22.2</td>
<td>9.6</td>
</tr>
<tr>
<td>2030</td>
<td>Alcohol use</td>
<td>10.9</td>
<td>43.7</td>
<td>9.0</td>
</tr>
<tr>
<td>2011</td>
<td>COPD</td>
<td>11.6</td>
<td>9.9</td>
<td>7.3</td>
</tr>
<tr>
<td>2030</td>
<td>COPD</td>
<td>13.3</td>
<td>12.9</td>
<td>6.7</td>
</tr>
<tr>
<td>2011</td>
<td>Lung cancer</td>
<td>11.6</td>
<td>6.9</td>
<td>7.3</td>
</tr>
<tr>
<td>2030</td>
<td>Lung cancer</td>
<td>12.3</td>
<td>12.9</td>
<td>6.7</td>
</tr>
<tr>
<td>2011</td>
<td>Anxiety disorders</td>
<td>10.2</td>
<td>6.6</td>
<td>7.3</td>
</tr>
<tr>
<td>2030</td>
<td>Anxiety disorders</td>
<td>9.5</td>
<td>10.5</td>
<td>6.7</td>
</tr>
<tr>
<td>2011</td>
<td>Diabetes mellitus</td>
<td>9.6</td>
<td>30.8</td>
<td>20.2</td>
</tr>
<tr>
<td>2030</td>
<td>Diabetes mellitus</td>
<td>9.8</td>
<td>48.8</td>
<td>32.5</td>
</tr>
</tbody>
</table>

Table 1 Leading causes of DALYs (per 1000 persons) for men in Amsterdam in 2011 and 2030, by ethnicity

Source: Ikram et al. EJPH 2013
Unravelling the impact of ethnicity on health in Europe: the HELIUS study

Karien Stronks¹*, Marieke B Snijder¹, Ron JG Peters², Maria Prins³,⁴, Aart H Schene⁵ and Aeilko H Zwinderman⁶

Abstract

Background: Populations in Europe are becoming increasingly ethnically diverse, and health risks differ between ethnic groups. The aim of the HELIUS (HEalthy Life in an Urban Setting) study is to unravel the mechanisms underlying the impact of ethnicity on communicable and non-communicable diseases.
What is HELIUS?

• HELIUS: HEalthy LIfe in an Urban Setting

• population-based study in 6 ethnic groups in Amsterdam: Dutch origin, Surinamese Hindustani (South-Asian) and Creole (African), Ghanaian, Turkish and Moroccan origin

• cardiovascular diseases, mental health, infectious diseases

• total of 25,000 respondents included, aged 18-70 y at baseline (measurement finished in December 2015)
Increased odds of depressive symptoms (PHQ-9) in ethnic minority populations, both first and second generation (age, sex adjusted)

<table>
<thead>
<tr>
<th>Ethnic minorities by cultural orientation</th>
<th>total</th>
<th>1st generation</th>
<th>2nd generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dutch origin</td>
<td>ref</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>integration</td>
<td>2.5 (2.1 - 2.9)</td>
<td>2.5 (2.1 - 2.9)</td>
<td>2.3 (1.8 - 2.9)</td>
</tr>
<tr>
<td>assimilation</td>
<td>4.6 (3.5 - 5.9)</td>
<td>4.7 (3.5 - 6.3)</td>
<td>4.1 (2.7 - 6.3)</td>
</tr>
<tr>
<td>separation</td>
<td>3.4 (2.8 - 4.1)</td>
<td>3.4 (2.8 - 4.1)</td>
<td>3.6 (2.4 - 4.0)</td>
</tr>
<tr>
<td>marginalisation</td>
<td>6.3 (4.5 - 8.6)</td>
<td>6.1 (4.3 - 8.8)</td>
<td>6.4 (3.5 - 11.7)</td>
</tr>
</tbody>
</table>

*Source: Stronks et al. in preparation (HELIUS)*
Outline

• Equity: the Policy Practice Gap in Health

• Current knowledge insufficient to close this gap

• Rethinking directions in research
Researchers: let’s reflect on our own role

Knowledge currently produced is not sufficient to facilitate policy makers in closing the policy practice gap:

- still descriptive studies
- too little attention for determinants affecting *incidence* of disease
- lack of knowledge on effective preventive interventions
Still descriptive studies...

- If studies ‘just’ describe patterns of disease in specific migrant populations,
- with attention for proximal risk factors,
- but without attention for ‘causes of the causes’,
- … the possibilities for generalising results to other populations, living in other places etc. are limited
Source: Stronks et al. 2013
Focus on health care unbalanced (1)

- Health inequalities arise as a result of determinants outside the health care sector in the first place: proximal determinants or causes of causes

- Nevertheless, current research has a strong focus on health care as a determinant
Inequalities in health arise in the first place.
Focus on health care unbalanced (2)

• This is not to deny the importance of health care research!

• But, if the aim is to develop recommendations to prevent e.g. inequalities in type 2 diabetes from arising,

• we need insight into determinants outside the health care sector in the first place: dietary and physical activity, genetics, discrimination etc.
Limited knowledge on effective preventive interventions

- Type 2 diabetes as an example
- High risk group interventions (diet, physical activity) have been shown to be effective in the general population,
- but less so in migrant populations (cf. EuroDhyan study – workshop this morning)
High risk approach to prevention of T2D effective in general population (risk reduction – 60%)

Annals of Internal Medicine

Combined Diet and Physical Activity Promotion Programs to Prevent Type 2 Diabetes Among Persons at Increased Risk: A Systematic Review for the Community Preventive Services Task Force

Ethan M. Balk, MD, MPH; Amy Earley, BS; Gowri Raman, MD, MS; Esther A. Avendano, BA; Anastassios G. Pittas, MD, MS; and Patrick L. Remington, MD, MPH

Background: Trials have shown efficacy of rigorous diet and physical activity promotion programs to reduce diabetes incidence. Compared with usual care, diet and physical activity promotion programs reduced type 2 diabetes incidence (risk
But, at most moderate effective in migrant groups ...

Intensive Lifestyle Intervention in General Practice to Prevent Type 2 Diabetes among 18 to 60-Year-Old South Asians: 1-Year Effects on the Weight Status and Metabolic Profile of Participants in a Randomized Controlled Trial

Wanda M. Admiraal¹,²*, Everlina M. Vlaar¹, Vera Nierkens¹, Frits Holleman², Barend J. C. Middelkoop³,⁴, Karien Stronks¹, Irene G. M. van Valkengoed¹

Discussion: An intensive, culturally targeted, lifestyle intervention of 1 year did not improve weight status and metabolic profile of South-Asians at risk of type 2 diabetes. The laborious recruitment, high drop-out, and lack of effectiveness emphasise the difficulty of realising health benefits in practice and suggest that this strategy might not be the optimal approach for this population.

Citation: Admiraal WM, Vlaar EM, Nierkens V, Holleman F, Middelkoop BJC, et al. (2013) Intensive Lifestyle Intervention in General Practice to Prevent Type 2 Diabetes among 18 to 60-Year-Old South Asians: 1-Year Effects on the Weight Status and Metabolic Profile of Participants in a Randomized Controlled Trial. PLoS ONE 8(7): e68605. doi:10.1371/journal.pone.0068605
Outline

• Equity: the Policy Practice Gap in Health

• Current knowledge insufficient to close this gap

• Rethinking directions in research
  – Studies on ‘causes of causes’
  – Evaluation studies
Research on ‘causes of causes’

- Understanding the uneven distribution of proximal risk factors in terms of conditions surrounding migration, e.g.
  - exposure to urban environment
  - separation from family and cultural norms
  - discrimination
  - socio-economic factors etc.

- Cf. plea of Ingleby (Psychosoc Int 2012; Granada 2014) for linking ‘migrant health’ and ‘social determinants of health’ agenda

- We need to develop adequate research infrastructure
Contribution of discrimination to inequalities in depression: points at need of *longitudinal* data  
*Source: Ikram et al. Eur J Public Health 2014*
In need of studies that compare ..... 

- ...migrants with host population (most common comparison)  
  - to estimate whether the risk of disease is increased  

- ...migrants with compatriots in home countries  
  - to assess the role of migration process  

- ...same migrant group living in different countries  
  - to assess the role of exposure to population in ‘host country’  

- ...subgroups within migrant population  
  - to assess the role of social determinants such as acculturation
RODAM study as an example – several types of comparisons

BMJ Open

Rationale and cross-sectional study design of the Research on Obesity and type 2 Diabetes among African Migrants: the RODAM study

Charles Agyemang,1 Erik Beune,1 Karlijn Meeks,1 Ellis Owusu-Dabo,2 Peter Agyei-Baffour,2 Ama de-Graft Aikins,3 Francis Dodoo,3 Liam Smeeth,4 Juliet Addo,4 Frank P Mockenhaupt,5 Stephen K Amoah,5 Matthias B Schulze,6 Ina Danquah,6 Joachim Spranger,7 Mary Nicolaou,1 Kerstin Klipstein-Grobusch,8,9 Tom Burr,10 Peter Henneman,11 Marcel M Mannens,11 Jan P van Straalen,12 Silver Bahendeka,13 A H Zwinderman,14 Anton E Kunst,1 Karien Stronks1


ABSTRACT

Introduction: Obesity and type 2 diabetes (T2D) are highly prevalent among African migrants compared with European descent populations. The underlying reasons still remain a puzzle. Gene-environmental interaction is now seen as a potential plausible factor contributing to the high prevalence of obesity and T2D, diagnosis and treatment in these populations and beyond.

INTRODUCTION
RODAM study: development of a unique migrant and non-migrant cohort

Baseline measurement completed

Total: 6132
- London (n=1112)
- Rural Ghana (n=1111)
- Berlin (n=578)
- Urban Ghana (n=1455)
- Amsterdam (n=1876)

Evaluation studies

• Studies that evaluate policies addressing ‘causes of causes’

• Examples: integration policies, socio-economic measures, food policies, improvements in build environment etc.

• Studies on mental health problems of refugees can serve as an example
Preserving and Improving the Mental Health of Refugees and Asylum Seekers

Literature Review for the Health Council of the Netherlands

Umar Ikram, Karien Stronks
2016
393 hits

Screening titles + abstracts

30 articles

Through reference lists

14 articles

Received

Experts

44 articles
- 4 meta-analysis
- 28 systematic reviews
- 12 scoping reviews
## Substantial evidence for ‘causes of causes’ in refugees

<table>
<thead>
<tr>
<th>Domain</th>
<th>Risk factor</th>
<th>Protective factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal characteristics</td>
<td>Older age, female, unaccompanied children</td>
<td>Psychological coping (e.g., focusing on present, acceptance)</td>
</tr>
<tr>
<td></td>
<td>Traumatic events</td>
<td></td>
</tr>
<tr>
<td>Family and community networks</td>
<td>Low social support, small networks</td>
<td>Informal social support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Practicing religion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parental disclosure</td>
</tr>
<tr>
<td>Social conditions in the host country</td>
<td>Difficulties arising from socio-cultural integration</td>
<td>Host language proficiency</td>
</tr>
<tr>
<td></td>
<td>Low current SES</td>
<td>Availability of economic opportunities</td>
</tr>
<tr>
<td></td>
<td>Loss of social status</td>
<td>Longer time since displacement</td>
</tr>
<tr>
<td></td>
<td>Limited access to MH services</td>
<td>Cultural-competent MH services</td>
</tr>
<tr>
<td></td>
<td>Certain conditions during asylum procedure</td>
<td>Private accommodation</td>
</tr>
</tbody>
</table>

Cultural-competent MH services
However,

- Although interventions that improve these social conditions are likely to have a positive impact on mental health, very little research has been done to actually show their effect in refugee populations.

- Even less so in labour etc. migrants.

- What might help to build this evidence base?
  - Studies comparing countries with different policies.
  - Experimental studies in new refugee populations (e.g., employment).
Conclusions

• Knowledge currently produced is not sufficient to facilitate policy makers in closing the policy practice gap in migrant health

• Longitudinal studies, incorporating various comparisons, with a focus on ‘causes of causes’, as well as evaluation studies targeting these conditions, will improve our insights into how to tackle the increased burden of disease in migrants

• Researchers, let’s join forces!