Common Threads in Obesity Risk among Racial/ethnic and Migrant Minority Populations

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Perspective

• The obesity epidemic is a major threat to population health globally.

• Racial/ethnic minority status is associated with above-average obesity risk compared to white majority populations

• Examining patterns of obesity risk in populations of color in different country contexts can lead to new insights and potentially to solutions.

Kumanyika et al, Community Energy Balance, Preventive Medicine, 2012
Kumanyika S, Unraveling Common Threads, under review
Causes of population-level obesity

• Population-wide increases in obesity are driven by societal forces (and the policies that govern these forces) that directly or indirectly relate to food systems or physical activity and converge to result in caloric overconsumption and excess weight gain.

• Apparently, these forces operate differently for minority populations of color—the question is why.
Prevalence of Obesity in US Adults and Youth, 2015-2016 (% with BMI ≥ 30)

Age-adjusted prevalence of obesity among adults > 20 y

<table>
<thead>
<tr>
<th></th>
<th>Non-Hispanic white</th>
<th>Non-Hispanic black</th>
<th>Non-Hispanic Asian</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>13.9</td>
<td>14.7</td>
<td>14.3</td>
<td>13.6</td>
</tr>
<tr>
<td>Men</td>
<td>13.9</td>
<td>14.7</td>
<td>14.3</td>
<td>13.6</td>
</tr>
<tr>
<td>Women</td>
<td>14.3</td>
<td>14.7</td>
<td>13.6</td>
<td>13.6</td>
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Age-adjusted prevalence of obesity among youth 2-19 y

<table>
<thead>
<tr>
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<th>Non-Hispanic white</th>
<th>Non-Hispanic black</th>
<th>Non-Hispanic Asian</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>14.1</td>
<td>12.0</td>
<td>12.8</td>
<td>13.1</td>
</tr>
<tr>
<td>Boys</td>
<td>14.1</td>
<td>12.0</td>
<td>12.8</td>
<td>13.1</td>
</tr>
<tr>
<td>Girls</td>
<td>14.6</td>
<td>11.7</td>
<td>12.8</td>
<td>13.5</td>
</tr>
</tbody>
</table>

Non-Hispanic black

Self-reported obesity prevalence by race/ethnicity, United States, 2016 (% with BMI ≥ 30)

The chart shows 95% confidence intervals

Adult (aged 16+) obesity: BMI ≥ 30kg/m²

Obesity prevalence is age standardised

Public Health England. Adult obesity slide set. Available at:
Obesity prevalence by ethnicity, Amsterdam, The Netherlands (% with BMI ≥ 30)

Male and female obesity rates by Indigenous status and age, Australia (BMI ≥ 30)

Male and female obesity rates by ethnic group, New Zealand (BMI $\geq 30$)

Findings

• Higher prevalence in minority populations of color relative to reference or host populations, especially in women.

• Longitudinal studies in migrants indicate that initially lower weights yield to excess weight gain over time.

• Cross-national, within-group studies indicate effects of western environments, e.g., compared to home countries.

• Cross-national studies within western environments indicate effects of national contexts.
Explanations

1. What is different about minority populations of color compared to host or reference populations?

2. What is similar in different societies as it relates to minority populations of color?
Collecting data by race or ethnicity

• Implies importance from a societal and policy perspective

• Routine in the US, although categories evolve – “race” is dominant; ethnicity is Hispanic or not

• “Color blindness” in Europe – country of origin and ethnicity identify populations of color; social class framing is preferred

• Subethnicity is important (i.e., heterogeneity) but not well addressed
In high-income countries, the risks of childhood obesity are greatest in lower socioeconomic groups. Although currently the converse is true in most low- and middle-income countries, a changing pattern is emerging.

Within countries, certain population subgroups, such as migrant and indigenous children, are at a particularly high risk of becoming obese, due to rapid acculturation and poor access to public health information.

World Health Organization, 2016
<table>
<thead>
<tr>
<th>Variable</th>
<th>Contexts</th>
</tr>
</thead>
</table>
| Racial/ethnic category (explicit or implicit, i.e., not being white) | • Cultural food preferences  
• Neighborhood access (segregation)  
• Targeted marketing of unhealthy foods  
• Mobility (freedom of movement)  
• Historical and ongoing trauma |
| Socioeconomic status; social position        | • Neighborhood access (poverty)  
• Food purchasing power  
• Food insecurity  
• Activity patterns  
• Housing  
• Access to health care |
| Migration and migration stress               | • Adverse circumstances prior to or during migration  
• Abrupt exposure to obesogenic environment  
• Loss of connections with home environment  
• Downward social mobility |
<table>
<thead>
<tr>
<th>Variable</th>
<th>Contexts</th>
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</thead>
<tbody>
<tr>
<td>Language/literacy</td>
<td>• Access to nutrition information</td>
</tr>
<tr>
<td></td>
<td>• Access to quality education</td>
</tr>
<tr>
<td></td>
<td>• Better social integration</td>
</tr>
<tr>
<td>Cultural assets and protection</td>
<td>• Preservation of traditional healthy behaviors</td>
</tr>
<tr>
<td></td>
<td>• Buffering from aggressive promotion of unhealthy foods and beverages</td>
</tr>
<tr>
<td></td>
<td>• Coping mechanisms, including faith</td>
</tr>
<tr>
<td>Structural empowerment and resilience</td>
<td>• Ability to benefit from new opportunities</td>
</tr>
<tr>
<td></td>
<td>• Social capital and social support</td>
</tr>
<tr>
<td>Stress</td>
<td>• Eating and physical activity</td>
</tr>
<tr>
<td></td>
<td>• “Embodiment”</td>
</tr>
<tr>
<td></td>
<td>• Constant need to cope</td>
</tr>
<tr>
<td></td>
<td>• Sleep</td>
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</table>
Stress and Health Disparities Report

Contexts, mechanisms and interventions among racial/ethnic minority and low socioeconomic status populations
Pathways for production of racial/ethnic and migrant inequities in obesity and potential points to intervene
Exposure to obesity-related risks
Vulnerability to obesity-related risks
Obesity and related diseases
Health and social consequences

Social and economic status
Segregation
Irreconcilable aspects of outsider status
Biological and behavioral, and psychosocial predispositions
Health and social care

Exposure to obesity-related risks
Vulnerability to obesity-related risks
Obesity and related diseases
Health and social consequences

National-level contexts—historical, sociocultural, economic, political, policy, and health, including food systems and patterns of physical activity

Pathways for production of racial/ethnic and migrant inequities in obesity and potential points to intervene
Pathways for production of racial/ethnic and migrant inequities in obesity and potential points to intervene

COUNTRY CONTEXTS

National-level contexts—historical, sociocultural, economic, political, policy, and health, including food systems and patterns of physical activity

“Isms”
Social stratification

Migrant status

Race/ethnicity

Other stratification variables

CONTEXTS FOR POPULATIONS OF COLOR

Social and economic status
Segregation

Irreconcilable aspects of outsider status

Biological and behavioral, and psychosocial predispositions

Health and social care

OBESITY RISKS AND OUTCOMES

Exposure to obesity-related risks

Vulnerability to obesity-related risks

Obesity and related diseases

Health and social consequences

COUNTRY CONTEXTS STRATIFICATION VARIABLES
Conclusions

• Obesity is more prevalent in ethnic minorities and immigrants vs. host populations
• Race, ethnicity, and migration intersect
• Studying this pattern in diverse high-income countries may inform policy actions
• Pathways emanating from social stratification based on race/ethnicity are implicated
• Solutions require disrupting racism (and other “isms” and addressing historical and ongoing stressors