An Integrative Review of Cardiovascular Disease in Lesbian, Gay and Bisexual Adults

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BACKGROUND

• LGB individuals face significant stigma and discrimination worldwide:
  • ↑ Psychosocial stressors \(^1\)-\(^2\)

• Negative health outcomes:
  • Poor mental and physical health \(^3\)-\(^5\)
  • Disability \(^5\)
  • Suicide and suicidal ideation \(^6\)
  • Decreased life expectancy \(^7\)

• Stress increases CVD risk through mediated inflammatory and coagulation pathways \(^8\)
CVD is leading cause of death worldwide:
  - 90% of CVD risk attributed to modifiable risk factors including stress

Risk behaviors related to stress ↑ CVD risk:
  - ↑ BMI in lesbian and bisexual women
  - ↑ Alcohol, tobacco and illicit drug use in LGB men and women

LGB population underrepresented in health disparities literature
  - Focus on mental health, STIs, and substance abuse
PURPOSE
Therefore, the purpose of this integrative review is to synthesize and critique the existing evidence from studies that compare CVD risk and CVD diagnoses between LGB and heterosexual adults.
METHODS
METHODS

- Whittemore & Knafl method of integrative review
  
- Six databases searched (CINAHL, Embase, LGBT Life, PubMed, PsycInfo, Web of Science)
  
- Search included key words related to LGB health and CVD
  
- Ancestry and descendancy search of retrieved studies and IOM report
• Inclusion criteria:
  • Peer-reviewed studies (1985-2015)
  • Examine CVD risk and/or CVD diagnoses
  • English-language
  • Participants over the age of 18

• Exclusion criteria:
  • Measures of sexual orientation other than identity, behavior or attraction
  • CVD in transgender individuals or those with HIV/AIDS
Records identified through database searching (n=735)

Additional records identified (n=0)

Records after duplicates removed (n=512)

Records excluded:
- Not CVD (n=5)
- Non-empirical (n=8)
- No comparison group (n=7)
- No CVD findings (n=1)
- Inappropriate measures (n=1)
  (n=22)

Inclusion criteria applied:
- CVD risk and/or diagnoses
- 1985-2015
- English-language
- Participants age 18 and over

Full text articles assessed for eligibility (n=53)

Records after duplicates removed (n=31)
DATA EVALUATION & DATA ANALYSIS

- **Data evaluation:**
  - Data extraction
  - Organizing matrices
  - Comparison
  - Verification

- **Data analysis: Crowe Critical Appraisal Tool**
  - Appraisal of 8 sections each worth 0-5 points
  - Total possible score 0-40 points
  - Scores ranged from 33-40
PRESENTATION OF RESULTS
## CVD RISK FACTORS

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Gay &amp; Bisexual Men</th>
<th>Lesbian &amp; Bisexual Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychosocial factors</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td></td>
<td>OR = 1.49-3.57</td>
<td>OR = 2.00-3.77</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>NS</td>
<td>↑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OR = 1.60-3.00</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>NS</td>
<td>↑</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OR = 1.43-2.67</td>
</tr>
<tr>
<td>Illicit drug use</td>
<td>↑</td>
<td>↑</td>
</tr>
<tr>
<td></td>
<td>OR = 1.59-3.09</td>
<td>OR = 2.14-4.54</td>
</tr>
<tr>
<td>Body mass index</td>
<td>↓</td>
<td>↑</td>
</tr>
<tr>
<td></td>
<td>OR = 0.48-0.70</td>
<td>OR = 1.20-2.05</td>
</tr>
<tr>
<td>Diet &amp; exercise</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>
CVD RISK

- CVD risk was elevated for LGB men and women in multiple studies
  - Used biomarkers

- Methods used to assess CVD risk varied
  - Cumulative CVD risk versus individual biomarkers
Few studies found differences in CVD

Hypertension
- Gay and bisexual men had higher rates of anti-hypertensive medication use and elevated blood pressure on screening
- Lesbian and bisexual women had conflicting findings

Diabetes and dyslipidemia
- Few differences
- Gay men reported higher glucose and lipids on screening
DISCUSSION
LIMITATIONS

• Sampling
  • Homogenous LGB participants
  • Few studies examined geographic differences

• Methods
  • Overlapping datasets
  • Cross-sectional data

• Measurement
  • Aggregated data
  • Few studies examined stress, diet, and physical activity
  • Biomarker use limited
IMPLICATIONS

• Impact of social policies on health of LGB adults needs further examination

• Integration of psychological, behavioral, and biological factors in LGB health research

• Need to focus on racial/ethnic minorities and older adults

• Providers should assess sexual orientation and CVD risk in LGB adults
• Elevated CVD risk in LGB men and women was identified

• Gay and bisexual men: excess CVD risk related to poor mental health, illicit drug use, and hypertension

• Lesbian and bisexual women: excess CVD risk related to poor mental health, tobacco, alcohol, and illicit drug use, and BMI

• There is a need for health promotion interventions that target CVD risk in LGB adults
THANK YOU!
REFERENCES

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