



NYU

**RORY MEYERS
COLLEGE OF NURSING**

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

**Billy A. Caceres
MSN, RN-BC, AGPCNP-BC
July 24, 2016**



NYU

**RORY MEYERS
COLLEGE OF NURSING**

BACKGROUND & SIGNIFICANCE

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

BACKGROUND

- **CVD is leading cause of death worldwide:**
 - **90% of CVD risk attributed to modifiable risk factors including stress** ⁹
- **Risk behaviors related to stress ↑ CVD risk:**
 - **↑ BMI in lesbian and bisexual women** ¹⁰⁻¹¹
 - **↑ Alcohol, tobacco and illicit drug use in LGB men and women** ¹²⁻¹⁵
- **LGB population underrepresented in health disparities literature** ¹⁶
 - **Focus on mental health, STIs, and substance abuse**



NYU

**RORY MEYERS
COLLEGE OF NURSING**

PURPOSE

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



NYU

**RORY MEYERS
COLLEGE OF NURSING**

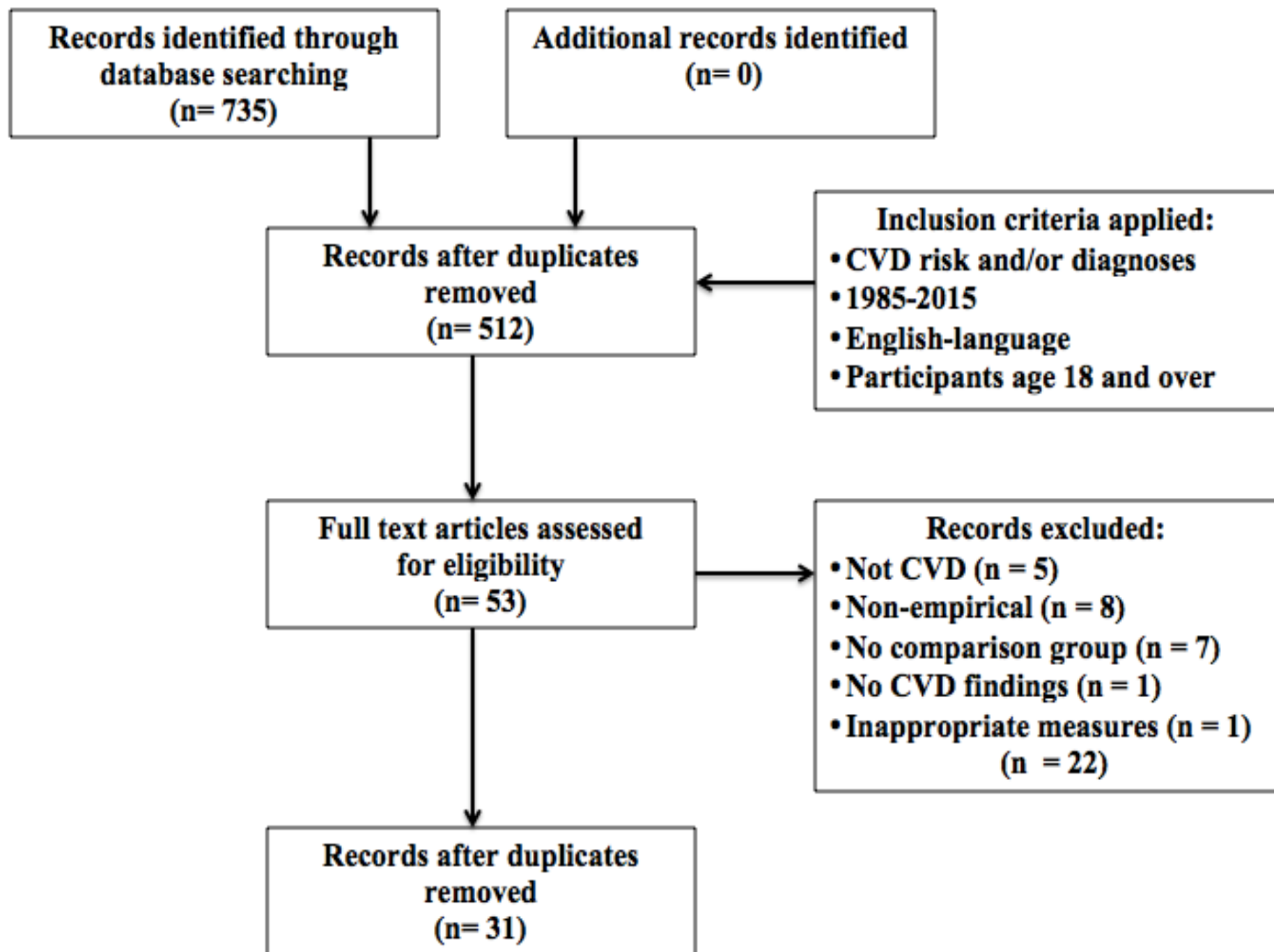
METHODS

METHODS

- **Whittemore & Knafl method of integrative review ¹⁷**
- **Six databases searched (CINAHL, Embase, LGBT Life, PubMed, PsycInfo, Web of Science)**
- **Search included key words related to LGB health and CVD**
- **Ancestry and descendance search of retrieved studies and IOM report**

INCLUSION/EXCLUSION CRITERIA

- **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**



DATA EVALUATION & DATA ANALYSIS

- **Data evaluation:**
 - **Data extraction**
 - **Organizing matrices**
 - **Comparison**
 - **Verification**
- **Data analysis: Crowe Critical Appraisal Tool ¹⁸**
 - **Appraisal of 8 sections each worth 0-5 points**
 - **Total possible score 0-40 points**
 - **Scores ranged from 33-40**



NYU

**RORY MEYERS
COLLEGE OF NURSING**

PRESENTATION OF RESULTS

CVD RISK FACTORS

Risk Factor	Gay & Bisexual Men	Lesbian & Bisexual Women
Psychosocial factors	↑ OR = 1.49-3.57	↑ OR = 2.00-3.77
Tobacco use	NS	↑ OR = 1.60-3.00
Alcohol consumption	NS	↑ OR = 1.43-2.67
Illicit drug use	↑ OR = 1.59-3.09	↑ OR = 2.14-4.54
Body mass index	↓ OR = 0.48-0.70	↑ OR = 1.20-2.05
Diet & exercise	NS	NS

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**

CVD DIAGNOSES

- **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**



NYU

**RORY MEYERS
COLLEGE OF NURSING**

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**

CONCLUSION

- **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**



NYU

**RORY MEYERS
COLLEGE OF NURSING**

THANK YOU!

REFERENCES

1. Institute of Medicine. (2011). *The health of lesbian, gay, bisexual, and transgender people*. Washington D.C.
2. Meyer, I.H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, 36(1), 38. doi:10.2307/2137286
3. Burgess, D., Lee, R., Tran, A., & Van Ryn, M. (2008). Effects of perceived discrimination on mental health and mental health services utilization among gay, lesbian, bisexual and transgender persons. *Journal of LGBT Health Research*, 3(4), 1–14. doi:10.1080/15574090802226626
4. Cochran, S.D., Mays, V.M., & Sullivan, J.G. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *Clin Psychol*, 71, 33-61.
5. Hatzenbuehler, M.L. (2009). How does sexual minority stigma “get under the skin?” A psychological mediation frame- work. *Psychological Bulletin*, 135, 707–730.
6. Meyer, I.H., Dietrich, J., & Schwartz, S. (2008). Lifetime prevalence of mental disorders and suicide attempts in diverse lesbian, gay, and bisexual populations. *American Journal of Public Health*, 98(6), 1004–6. doi:10.2105/AJPH.2006.096826
7. Hatzenbuehler, M. L., Bellatorre, A., Lee, Y., Finch, B. K., Muennig, P., & Fiscella, K. (2014). Structural stigma and all-cause mortality in sexual minority populations. *Social Science & Medicine*, 103, 33–41. doi:10.1016/j.socscimed.2013.06.005
8. Yusuf, S., Hawken, S., Ôunpuu, S., Dans, T., Avezum, A., Lanas, F., ... Pais, P. (2004). Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. *Lancet*, 364, 937–952.
9. Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *JAMA : The Journal of the American Medical Association*, 298(14), 1685–1687. doi:10.1001/jama.298.14.1685

REFERENCES

- 10.Boehmer, U., & Bowen, D.J. (2009). Examining factors linked to overweight and obesity in women of different sexual orientations. *Preventive Medicine*, 48(4), 357–61. doi:10.1016/j.ypmed.2009.02.003
- 11.Bowen, D.J., Balsam, K., & Ender, S.R. (2008). A review of obesity issues in sexual minority women. *Obesity*, 16(2), 221–228.
- 12.Cochran, S.D., Ackerman, D., Mays, V.M., & Ross, M.W. (2004). Prevalence of non-medical drug use and dependence among homosexually active men and women in the US population. *Addiction*. 99(8), 989–998.
- 13.Fredriksen-Goldsen, K. I., Emlert, C. A., Kim, H.-J., Muraco, A., Erosheva, E. A., Goldsen, J., & Hoy-Ellis, C. P. (2013b). The physical and mental health of lesbian, gay male, and bisexual (LGB) older adults: The role of key health indicators and risk and protective factors. *The Gerontologist*, 53(4), 664–75. doi:10.1093/geront/gns123
- 14.Gruskin, E. P., Greenwood, G. L., Matevia, M., Pollack, L. M., & Bye, L. L. (2007). Disparities in smoking between the lesbian, gay, and bisexual population and the general population in California. *American Journal of Public Health*, 97(8), 1496–502.
- 15.Tang, H., Greenwood, G. L., Cowling, D. W., Lloyd, J. C., Roeseler, A. G., & Bal, D. G. (2004). Cigarette smoking among lesbians, gays, and bisexuals: How serious a problem? (United States). *Cancer Causes and Control*, 15(8), 797–803. doi:10.1023/B:CACO.0000043430.32410.69
- 16.Coulter, R. W. S., Kenst, K. S., & Bowen, D. J. (2014). Research funded by the National Institutes of Health on the health of lesbian, gay, bisexual, and transgender populations. *American Journal of Public*, 104(2), 105–112. doi:10.2105/AJPH.2013.301501
- 17.Whittemore, R., & Knafl, K. (2005). The integrative review: updated methodology. *Journal of Advanced Nursing*, 52(5), 546–53. doi:10.1111/j.1365-2648.2005.03621.x
- 18.Crowe, M., Sheppard, L., & Campbell, A. (2011). Comparison of the effects of using the Crowe critical appraisal tool versus informal appraisal in assessing health research: A randomised trial. *International Journal of Evidence-Based Healthcare*, 9(4), 444–449. doi:10.1111/j.1744-1609.2011.00237.x