

**The Cost of Homophobia:
Literature Review
on the
Human Impact
of
Homophobia
In
Canada**

of Homophobia

1

Human Impact

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immunodeficiency Syndrome
GB:	Gay males and Bisexual males and females
GL:	Gay males and Lesbian females
GLB:	Gay males, Lesbian females, and Bisexual males and females
GLBT:	Gay males, Lesbian females, Bisexual persons and Transgendered persons
HIV:	Human Immunodeficiency Virus
US:	United States of America

NOTE ON STATISTICS

Several statistical terms are used throughout this document; below are some definitions of those terms:

Mean: The arithmetic average of a set of data or group of numbers. For example, the mean of this group of numbers (1, 3, 4, 7, 5) is 4 since $(1 + 3 + 4 + 7 + 5) / 5 = 4$.

Median: The middle value in a distribution in terms of the frequency. The median is the value that has fifty percent of all of the values in the distribution both below and above it. For example, the median of this group of numbers (1, 1, 4, 6, 10) is 4 since two numbers are below it (1, 1) and two are above it (6, 10). If a set of data contains an even amount of numbers, then the median is the average of the two middle numbers. For example, the median of this group of number (1, 2, 4, 7) is 3 since the average of 2 and 4 is 3.

Outlier: A number that is far apart from the rest of the data; an extreme value either much lower or much higher than the rest of the values in the data set. Outliers are known to skew means or averages. For example, 85 is an outlier in this group of numbers (1, 1, 3, 4, 1, 3, 85).

EXECUTIVE SUMMARY

Research was reviewed related to the negative results of homophobia on gays, lesbians and bisexuals (GLB), and the human impact of such negative effects. Human impact was defined as the number of “pre-mature” deaths caused by homophobia; that is, compared to mortality rates of non-GLB, human costs measures how many GLB die before they otherwise would have as a result of homophobia. Homophobia was defined as the irrational fear of, or aversion to, homosexuals and homosexuality, while the related construct of heterosexism was defined as a belief system that values heterosexuality as superior to and/or more natural than homosexuality, and/or the assumption that all people are heterosexual. The research reviewed showed that GLB and heterosexuals were equivalent in terms of psychological and psychosocial health and functioning, but that GLB had a shorter life expectancy and faced health risks and social problems at a greater rate than the heterosexual population. The suspected reason for these increased problems is the chronic stress placed on GLB resultant from coping with society’s negative responses and stigmatization.

Eight major health and social issues were examined, which included suicide, smoking, alcohol abuse, illicit drug use, depression, unemployment, murder, and HIV/AIDS. In addition, since homophobia results in substandard health care for GLB, the issue of access and quality of health care services was examined, since ineffective health services and practices exacerbate the health and social issues that were examined.

Using the assumption that, without the existence of homophobia, GLB and the heterosexual population would have equivalent rates of health and social issues, estimates of the annual number of pre-mature deaths caused by homophobia were developed based on five and ten percent base rates of homosexuality:

- Suicide = 818 to 968 deaths per year
- Smoking = 1232 to 2599 deaths per year
- Alcohol abuse = 236 to 1843 deaths per year
- Illicit drug use = 64 to 74 deaths per year

There was insufficient data to calculate mortality estimates for the issues of depression, unemployment, murder and HIV/AIDS; however, the annual human costs associated with those issues are substantial, and evidence exists that indicates GLB are at increased risks for contracting HIV/AIDS, of being victims of murder, and of being unemployed, which ultimately results in pre-mature mortality.

The present research has several weaknesses that are reviewed in the Limitations section. Most of these limitations can be overcome with further research. Additional research needs to be conducted in the area of homophobia, the consequences of homophobia on GLB and the human impact of those consequences. In addition, methodological improvements need to be implemented in further research in the area to ensure conclusions are valid.

FOREWORD by Gens Hellquist

If there's been one constant in my nearly 40 years of participation in the gay and lesbian community and my over 30 years as a gay activist, it has been death. Some of my earliest memories of being a part of this community were hearing about the death of someone that I had known from my involvement in the gay, lesbian and bisexual community. While it was often difficult to understand what dark force would lead someone to take their life, after listening to people's stories of rejection and verbal and physical violence it became easier to understand. These were people who believed they could no longer survive in an environment that was so hateful and intolerant. I've watched close and dear friends slowly kill themselves with alcohol and drugs and I have watched a generation of gay men decimated by AIDS. This is not something that simply happened in my early days of involvement in the GLBT community but something that continues today.

Gay & Lesbian Health Services commissioned this study because we work with that pain and intolerance and know first hand the enormous toll that homophobia exacts on our community and our lives. We also know the importance of being mindful that we are talking about real people in this study, not just abstract statistics. Those victims of homophobia are someone's child, grandchild, parent, brother, sister, aunt, uncle or best friend. Each death has an impact far beyond the loss of that one life.

Two of the men who were important mentors to me when I first came out have been dead for a number of years. Both died a slow and painful death from alcoholism long before their

time. They were brilliant, witty men who dedicated their lives to educating others. If they were still alive they would be at that point in their life when they would be retiring. However, the stressors brought about by homophobia caused them to adopt coping mechanisms that killed them before their time.

I remember a young man who grew up in my neighbourhood. Jim was a few years younger than me and after I moved out of the neighbourhood I had no expectation of seeing him again. However, he was soon back in my life when he called and asked specifically for me on Saskatoon's first gay/lesbian phone-line. He talked about his feelings of being gay and how frightening it was for him to embrace those feelings. He felt being gay would be a major disappointment to his family.

Like most mothers, mine would keep me up-to-date about the lives of those who grew up in the neighbourhood and it was no different with Jim. She kept me informed about Jim's marriage, divorce, remarriage and birth of his first child. Occasionally I would run into Jim hanging in the shadows of a gay venue and we would once again talk about the difficulty he was having in accepting being gay. He was a gentle and kind man, respected by all who knew him. This went on for a number of years until one morning when I opened the newspaper to learn that he had driven out to the country, put a pistol to his head and killed himself. On my next visit with my mother she talked about the confusion his family was going through trying to figure out why someone who appeared to have everything going for him would

kill himself. I, however, knew the reason.

Jim is only one of countless young people I have watched kill themselves because the stressors of living in a homophobic environment were too much for them to bear. Usually the survivors are left wondering why their loved one chose to kill themselves. What was so bad that it drove them to take their life? In most cases the real story was never told.

In the 1980s AIDS hit my community hard and a new round of death and dying began. Those who have worked in the AIDS field are only too aware of how homophobia causes people to devalue their life and take risks that make them susceptible to HIV. Issues of low self-esteem are epidemic in my community and cause people to devalue their lives. Marginalization has a negative impact on any community that is denied the full rights of citizenship whether it occurs because of racism, colonialization, sexism or homophobia.

The maddening thing about all these deaths is that they are preventable. Our health care systems and our education systems are rife with homophobia. Governments are reluctant to take action for fear of hostile reactions from those segments of society who wish to keep homophobia live. While the research clearly shows that the health and social problems endemic to the GLBT population result from the stressors of living in a climate of ignorance and hate, those enablers of homophobia twist that research to suggest the mere fact of being gay is what causes the problems.

It's time we looked at the facts and addressed the issues. A 2001 study that looked at the economic cost of homophobia shows that it could be as high as 8 billion dollars a year. This study clearly shows that it is killing people at an alarming rate. Make no mistake about it, homophobia is clearly killing us.

INTRODUCTION

This literature review is a companion report to “The Cost of Homophobia: Literature Review of the Economic Impact of Homophobia on Canada” (Banks, 2001). While the original report examined the financial costs of homophobia, the present report examines the human costs of homophobia. Human cost is defined as the annual number of GLB individuals who die each year “prematurely” most likely as a result of homophobia; that is, without homophobia, death rates of GLB and non-GLB should be equivalent.

The purpose of the present report is similar to the original: to examine and synthesize existing data and research on the human impact of homophobia on Canadian society. In general, the literature search focused on answering these questions:

1. What effect does homophobia have on gays, lesbians and bisexuals (GLB)?
2. As compared to the general population, do GLB have increased rates of health and social problems as result of homophobia?
3. What are the number of “premature” deaths due to these increased rates of health and social problems?

Some short, informal overviews of the issues related to homophobia, GLB health, and related human costs have been attempted (e.g., Hellquist, 1996), but none have attempted to integrate the three components in a single document.

This literature review is not an entirely comprehensive review of the issue of the human impact of homophobia in Canada for several

reasons. First, although a wide-ranging search of medical, psychology, and sociology databases was undertaken on subjects related to homophobia, the human impact of various health and social issues, and the base rate of homosexuality, there are large gaps in knowledge for which there was no research or data available. As Ryan, Brotman and Rowe (2000) and Goldfried (2001) point out, documentation on GLB health is relatively scarce, and homosexuality issues in general have been largely ignored in mainstream research. Especially scarce is information on the effect homophobia has on GLB health. The present document does not attempt to fill in those knowledge gaps, but rather summarizes current knowledge and suggests future research.

Second, research and literature reviews already exist that attempt to answer the first two of the three questions posed above. Therefore, an in depth analysis of those areas and some related areas is not repeated in the present review. For example, the present review does not examine in detail the health effects and subsequent mortality of illicit drug use on humans.

Given these limitations on the comprehensiveness of this literature review, the present review does accomplish several important goals: (1) synthesizing the research on homophobia, GLB health and social issues, (2) providing an exploratory analysis of the human impact of homophobia, and (3) an identification of gaps in the research and further research that needs to be conducted.

HOMOPHOBIA

Definition

Negative attitudes toward homosexuality exist on a continuum from homophobia to heterosexism (Berkman & Zinberg, 1997):

Homophobia: Any belief system that supports negative myths and stereotypes about homosexual people, or any of the varieties of negative attitudes that arise from fear or dislike of homosexuality. The irrational fear of, or aversion to, homosexuals and homosexuality. Homophobics react to homosexuals as enemies to be feared, hated and actively repressed (Mihalik, 1991).

Heterosexism: A belief system that values heterosexuality as superior to and/or more natural than homosexuality; that does not acknowledge the existence of non-heterosexuals; and that assumes that all people are heterosexual. A belief that heterosexuality is normative and that non-heterosexuality is deviant and intrinsically less desirable. Heterosexists react to homosexuals as unfortunate, devalued individuals (Mihalik, 1991).

Homophobia can manifest itself in a number of ways:

Internal Homophobia: Learned biases that individuals, including GLB, incorporate or internalize into their belief systemsⁱⁱ.

External Homophobia: Overtly observed or experienced expression of internal biases such as social

avoidance, verbal abuse, and civil discrimination.

In addition, there are other types of homophobia/heterosexism:

Institutional Homophobia or Heterosexism: Refers to the many ways in which government, business, churches, educational institutions and other organizations and institutions discriminate against people on the basis of sexual orientation. These organizations and institutions set policies, allocate resources, and maintain unwritten standards for the behaviour of their members in ways that discriminate. For example, many religious organizations have stated policies against GLB people holding offices; most educational institutions fail or refuse to allocate funds and staff for GLB support groups; and most businesses have norms for social events which prevent GLB employees from bringing their same sex partners while heterosexual employees are encouraged to bring their opposite sex partners.

Cultural Homophobia or Heterosexism: Refers to social standards and norms which dictate that being heterosexual is better or more moral than being GLB, and that everyone is heterosexual or should be. While these standards are not written down as such, they are spelled out each day in television shows where the vast majority of characters are heterosexual and most relationships involve a female and a male; or in the assumption made by most adults in social situations that all "normal"

children will eventually be attracted to and marry a person of the opposite sex. Often heterosexual people do not realize that these standards exist, while GLB people are acutely aware of the standards. The feeling that results is one of being an outsider in society.

Heterosexism is more subtle than homophobia and permeates culture and its social institutions (Berkman & Zinberg, 1997). Homophobia and/or heterosexism have been demonstrated in mental health practitioners (Rudolph, 1988; Rudolph, 1989; Garfinkle & Morin, 1978; Glenn & Russell, 1986; Lawrence et al., 1990; Trezza, 1994), undergraduates (O'Hare, Williams & Ezoviski, 1996), nurses (Smith, 1993b; Strasser & Damrosch, 1992), governments (Herek, 1990) and social workers (Berkman & Zinberg, 1997).

Homophobia, or more accurately, sexual prejudice, can be directed at homosexual behaviour, people with homosexual or bisexual orientation, communities of GLB people (Herek, 2000) or the children of GLB (Gershon, Tschann & Jemerin, 1999).

Most individuals do not perceive themselves as homophobic, yet unfamiliarity with members of the GLB community can inadvertently result in acceptance of misinformation or biased attitudes (O'Hanlan, 1995). Several studies have shown that individuals who know one or more GLB personally demonstrate less hostility toward all GLB (Ellis & Vasseur, 1993; Smith, 1993b).

Evidence exists that indicates that homophobia and stigmatization of GLB is a serious and prevalent social problem in North America (Tremblay & Ramsay, 2000; Herek, 1991). For example, King, Beazley, Warren,

Hankins, Robertson, and Radford (1988) found that only thirty-three percent of Canadian grade seven students agreed with the statement "Homosexuals should be allowed to be teachers," and only eighteen percent reported that they "would be comfortable talking with a homosexual person."

The reasons for the existence of homophobia are varied and numerous. Other authors have reviewed these reasons in detail (e.g., Stein, 1999). Some examples of these are:

- There is an absence of accurate and positive portrayals of GLB in media (O'Hanlan, 1995). There is also a lack of positive GLB role models in society (Morrow, 1993).
- There is an absence of accurate information regarding same-sex orientation available to the public (Dempsey, 1994).
- The American Psychiatric Association regarded homosexuality as psychopathology until 1973. Homosexuality is still a classification category in the International Classification of Diseases (World Health Organization, 1997).
- Some religious institutions and other groups portray homosexuality as immoral and perpetuate the negative stereotypes associated with homosexuality (Stokes, Kilman & Wanlass, 1983; O'Brien, 1991; Forstein, 1988).
- The education system does not usually teach school-aged children about sexual diversity or orientation (Morrow, 1993; Remafedi, 1993; Glasgow Women's Library, 1999).
- There are minimal sanctions against those who harass and discriminate against GLB (Morrow, 1993). Also, there is tolerance of homophobic and heterosexist attitudes in society (Morrison & L'Heureux, 2001).

- National and local governments often pass laws stating that homosexual behaviour is wrong and criminal (Dempsey, 1994).
- Most GLB hide their true identity and so constitute an invisible population; therefore, the majority of the heterosexual population does not become familiar with GLB, and biases can flourish.

Effect of Homophobia on Gay, Lesbian and Bisexual Individuals

Being GLB is not genetically or biologically hazardous to one's physical or psychological health (O'Hanlan, 1995; Remafedi, French, Story, Resnick & Blum, 1998; Ross, Paulsen & Stalstrom, 1988; Wayment & Peplau, 1995). Although few studies have directly linked particular stressors resulting from homophobia and their health and social outcomes, most researchers agree that homophobia increases a multitude of risk factors associated with psychological, psychosocial, psychiatric, social and health problems (Bagley & D'Augelli, 2000; D'Augelli & Hershberger, 1993; Frable, Wortman & Joseph, 1997; Schneider, Farberow & Kruks, 1989; Muehrer, 1995) and that homophobia is a major health hazard to GLB and society (Wagner, 1997). Ross (1989) studied homosexually oriented males in four countries (i.e., Sweden, Finland, Ireland and Australia) and found that homosexual adolescents are likely to have more problems in the more anti-homosexual countries. This suggests that the level of homophobia manifested in a particular country or culture may be directly linked to the extent of GLB health and social problems.

Some examples of the specific problems that GLB suffer that are associated with homophobia include

higher rates of depression, anxiety, substance abuse, loneliness and other psychological distress (Morrow, 1993; Rudolph, 1988; Rudolph, 1989; Ungvarski & Grossman, 1999; Ziebold & Mongeon, 1982; Kehoe, 1990).

Reasons for Negative Effects

In general, the chronic stress of coping with social stigmatization and societal hatred is the primary reason for the negative effects of homophobia (Bux, 1996; Greene, 1994; Ross, 1978; Cochran & Mays, 1994; Gillow & Davis, 1987; Savin-Williams, 1994; Ungvarski & Grossman, 1999). Meyer (1995) conceptualized the homophobia GLB feel as a component of minority stress, which is the psychosocial stress derived from membership in a low status minority group. Meyer (1995) theorized that GLB are subjected to chronic stress related to their stigmatization, their internalized homophobia and actual events of discrimination and violence. More specifically, the reasons for the deleterious effects of homophobia are listed below:

Lack of Support and Helping Resources. GLB feel isolation, alienation and disenfranchisement from the resources and assistance society ordinarily provides in the face of life stressors (Waldo, Hesson-McInnis & D'Augelli, 1998; Saunders & Valente, 1987; Prince, 1995). Well-being and health are negatively affected when GLB do not have social and family support and a sense of community (Nesmith, Burton & Cosgrove, 1999; Strommen, 1989b; Hershberger & D'Augelli, 1995; Turner, Pearlin & Mullan, 1998; Johnston, Stall & Smith, 1995; Watkins, 2000). Loss of support is also seen in the workplace; GLB who experience greater heterosexism demonstrate greater job

withdrawal (Waldo, 1999). Although all people experience health and social problems, GLB are especially vulnerable because of a lack of support, and denial of information and helping resources. In addition, stress caused by homophobia may be worse than other stressors because of the loss of friend and family support systems (Bradford, Ryan & Rothblum, 1994; DiPlacido, 1994; Brooks, 1981; Larson & Chastain, 1990). These support systems are lost because GLB have been rejected or have a need to hide their thoughts and feelings.

Internalized Homophobia. GLB feel distress that is the result of internalized negative attitudes toward one's own homosexuality (Protor & Groze, 1994; Malyon, 1982; Forstein, 1988; Meyer & Dean, 1996). Internalized homophobia in GLB results in lower levels of community integration and social support, lower self-esteem, increased feelings of guilt, demoralization, alienation, isolation and other problems (Bux, 1996; Meyer & Dean, 1996; McGregor et al., 2001; Flowers & Buston, 2001). Meyer and Dean (1996) found that GLB with higher internalized homophobia had fewer coping abilities. Alternately, Hershberger & D'Augelli (1995) found that self-acceptance (i.e., low internalized homophobia) was the largest predictor of mental health in a sample of GLB.

Self-concealment of Sexual Orientation. As a result of living in a homophobic society, many GLB feel pressure to conform and fear discrimination and reprisals. This in turn causes many GLB to conceal their sexual orientation, to be secretive in their lives, and to repress their feelings,

which causes unusual stress (Roberts & Sorensen, 1995; D'Augelli, Hershberger & Pilkington, 1998; Ungvarski & Grossman, 1999; Herek, 1991; Sewell et al., 2000; Mays & Cochran, 2001). Concealing homosexuality has been found to have a negative effect on physical health (Larson & Chastain, 1990). Cole, Kemeny, Taylor and Visscher (1996) found that in their sample of 222 GB males, the incidence of cancer and moderately serious infectious diseases (e.g., pneumonia, bronchitis, sinusitis, tuberculosis) increased in direct proportion to the degree to which participants concealed their homosexual identity. None of these effects could be accounted for by demographic characteristics, health relevant behavioural patterns, depression, anxiety, repressive coping or social desirability response biases. In general, openness to others about sexual orientation is associated with better psychological adjustment, less fear of exposure, increased receiving of mental health services, and increased choice about where to seek help (Bradford, Ryan & Rothblum, 1994); however, there are also risks associated with such disclosures (see Garnets & Kimmel, 1991; Gonsiorek & Rudolph, 1991).

Alteration of Behaviour. Homophobia results in the alteration of behaviour to avoid anti-GLB harassment or violence (e.g., not speaking about their lives to co-workers, friends or family; altering clothing; avoiding physical contact with partner/lover in public; and altering political involvement in community issues) (e.g., Padesky, 1989). Although these behaviours probably do not directly result in increased health problems, the further isolation that the behaviours entail may indirectly lead to

the exacerbation of health and social problems.

Coming Out Stress. The process of coming out of secrecy and disclosing one's homosexuality to friends and family is an emotionally stressful process that often results in social rejection, non-supportiveness, shame, diminished self-concept, intolerance, lowered self esteem, emotional isolation, severe anxiety, loss of loved ones, discrimination, verbal and physical abuse, depression, and other stress related patterns (e.g., dissatisfaction with sex lives, problems in close relationships, feeling overwhelmed) (Roberts & Sorensen, 1995; D'Augelli, Hershberger & Pilkington, 1998; O'Hanlan, 1995; Schneider, Farberow & Kruks, 1989; Strommen, 1989a; Strommen, 1989b; Garnets, Herek & Levy, 1990; Morrison & L'Heureux, 2001).

Coming Out and Risk Behaviours. The results of revealing ones sexual orientation described above place GLB at risk of engaging in individual risk behaviours and clusters of risk behaviours (e.g., unsupportive health habits, self-destructive behaviours). Garofalo, Wolf, Kessel, Palfrey & DuRant (1998) analyzed data from a survey of 4159 Massachusetts' youth, of which 104 self identified as GLB. Results indicate that more than 30 health risk behaviours were positively associated with self-reported GLB orientation including violence-related behaviours, suicidal ideation and attempts, multiple substance abuse, and sexual risk behaviours.

Confusion Related to Expressing Sexuality. GLB are not usually confused about sexuality, but are often confused

about how to express it in a hostile social environment (Herrell, Goldberg, True, Ramakrishnan, Lyons, Eisen & Tsuang, 1999). Sexuality identity was cited as a source of stress in lesbians 3.5 times more frequently than in heterosexual women (Bernhard & Applegate, 1999).

External Homophobia. Many of the outcomes of homophobia are related to external homophobia such as hostile attitudes, verbal and physical assaults (Herek, 1986; Larsen, Reed & Hoffman, 1980; Remafedi, 1987; Hershberger & D'Augelli, 1995; Herek, 1991), and denial of employment, housing, custody and legal representation (Wagner, 1997). For example, victims of GLB hate violence can suffer psychological and emotional outcomes such as phobias, post-traumatic stress syndromes, chronic pain syndromes, eating disorders, headaches, increased agitation, sleep disorders, uncontrollable crying, and depression (Barnes & Ephross, 1994; Otis & Skinner, 1996).

Coping and Substance Abuse. Wells (1999) notes that GLB may use substances as a mechanism for coping or as a means of escape from painful emotional issues or sexual identity.

Positive Responses. Not all GLB exhibit negative effects as a result of homophobia; many GLB often exhibit resiliency (Savin-Williams, 2001), even in the most extreme situations (Tremble, 1993). For example, Anderson (1998) found that in a sample of gay male youth, many individuals developed strengths that enabled them to successfully cope with the stresses of being gay. Also, Bennett and Thompson (1980) found that older gay men had

more stable self-concepts and greater satisfaction with their heterosocial lives than younger gay men, perhaps suggesting that over time, GLB individuals acquire more successful coping strategies.

Alternative Explanations for Increased Incidences of Negative Health and Social Problems

Fergusson, Horwood and Beatrais (1999) conclude that, although there may be an association between sexual orientation and several health and social problems, the cause of such problems cannot be definitively interpreted as being a result of homophobic attitudes and social prejudice. The researchers offer three alternative explanations: (1) associations are artifactual as a result of measurement and other research design problems; (2) the possibility of reverse causality in which people prone to some problems (e.g., psychiatric disorders) are more prone to experience homosexual attraction or contact; and (3) the possibility that lifestyle choices made by GLB place them at greater risk of adverse life events and stresses that include risks of health and social problems, independent of sexual

orientation (also discussed by Bux, 1996). The three alternative explanations given by Fergusson, Horwood and Beatrais (1999) have not been accounted for in much of the research conducted in the area.

Bux (1996) reviewed several theories to explain health problems in GLB, which included: (1) internalized homophobia (self-hatred of one's own sexuality); (2) gender-role conflict and gender non-conformity (discomfort or rejection of traditional gender role); (3) social stress and discrimination (due to experienced discrimination and prejudice, GLB experience high levels of stress, tension, and anxiety); (4) aspects of gay and lesbian subculture (reliance on bars for social outlets); and (5) differences in social roles and adult development. Bux (1996) found that, although there was little empirical evidence to support any of the theories, the social stress and discrimination theory enjoyed the most support. Therefore, although several alternate theories exist to explain health problems in GLB, Bux's (1996) results seem to indicate that it is homophobia that is the most likely cause.

BASE RATE OF HOMOSEXUALITY AND BISEXUALITY

The present literature review contains a review of the studies estimating the base rate of homosexuality in the general population. This is required because, in order to estimate the human impact of increased health and social issues of gays and lesbians, it must first be determined the base rate of homosexuality (i.e., percentage of the population who are GLB). There are many difficulties in estimating this base rate. The first difficulty is that there are a multitude of conceptual and operational definitions of the terms "gay," "lesbian," "bisexuality" and "homosexuality." For example, homosexuality can be defined behaviourally (e.g., sexual practices include homosexual sex) or by identity constructs (e.g., participation in GLB socio-cultural network). Homosexuality can also be defined as a dichotomous construct, or as a continuum (Kinsey, Pomeroy & Martin, 1948 and 1953). Although some good definitions exist (e.g., "a man [woman] who has affection and attraction, both emotional and physical, for other men [women]" (Government of Canada, 1998)), a detailed review of the various definitions is not given here (see Stein (1999) for a useful overview of sexual orientation).

A related problem is that studies that use different definitions of homosexuality use different survey instruments, different assumptions

related to the cause of homosexuality (e.g., biological or genetic, psychological, social, character preference), different research settings and different sampling methods based on those different definitions. This makes comparing base rate studies very difficult.

The second major difficulty is that sexual orientation cuts across all social categories, which makes any generalizations from research difficult. Another difficulty is that GLB are relatively hidden in society, and so it is difficult to ascertain the base rate accurately using self-report methods. As long as discrimination exists, the exact prevalence will be impossible to ascertain (Ryan, Brotman & Rowe, 2000). Also, "estimating a single number for the prevalence of homosexuality is a futile exercise because it presupposes assumptions that are patently false: that homosexuality is a uniform attribute across individuals, that it is stable over time, and that it can be uniformly measured" (Laumann, Gagnon, Michael & Michales, 1994). Stein (1999) therefore suggests that studies should use various estimates of the base rate of homosexuality.

The present literature review employed this method of using a low and high estimate of the base rate of homosexuality. Table 1 lists some estimates from the research literature.

Table 1. Estimates of the Base Rate of Homosexuality and Bisexuality

Estimate of Percentage of Population that is Homosexual	Definition of Homosexuality (Sample Description)	Research Study
37.0	Men admitting to at least some overt homosexual experience between adolescence and old age (5300 white males in the United States).	Kinsey, Pomeroy, and Martin (1948)
20.3	Adult males having had a homosexual experience to orgasm (data from National Opinion Research Center survey of 1450 males in the United States).	Fay, Turner, Klasser and Gagnon (1989)
18.6	Males reporting same-sex attraction to or sexual behaviour since age 15 (3381 participants in the United States, France and the United Kingdom).	Sell, Wells and Wypij (1995)
18.6	Females reporting same-sex attraction to or sexual behaviour since age 15 (1874 participants in the United States, France and the United Kingdom).	Sell, Wells and Wypij (1995)
17.0	High estimate of predominant same sex orientation (review of Kinsey, Pomeroy and Martin (1948) and Laumann, Gagnon, Michael and Michales (1994) studies adjusting for possible risks involved in self-disclosure).	Gonsiorek, Sell and Weinrich (1995)
15.3	Males reporting being homosexual to some degree (stratified random sample of 750 males in Calgary).	Bagley and Tremblay (1997a)
13.0	Women admitting to at least some overt homosexual experience between adolescence and old age (5940 white females in the United States).	Kinsey, Pomeroy, and Martin (1948)
10.0	Men who were more or less exclusively homosexual for at least three years (5300 white males in the United States).	Kinsey, Pomeroy, and Martin (1948)
9.2	High estimate from a male twin study (161 males in the United States).	Bailey and Pillard (1991)
9.0	Men reporting having had frequent or on going homosexual experiences (cross sectional nationwide survey of American adults aged 18 and over).	Janus and Janus (1993)
7.5	Males reporting same-sex sexual partner in last five years (3685 participants in the United States, France and the United Kingdom).	Sell, Wells and Wypij (1995)
7.0	High estimate of males having experienced some same sex sexual contact in adulthood (review of five probability surveys from 1970 to 1990 in the United States involving 8,857 participants).	Rogers and Turner (1991)
7.0	Males having a homosexual experience during more than three years of their lives (volunteer survey of 2036 people).	Hunt (1974)
7.0	Preferential, experimental and situational homosexuals (review of 12 large surveys)	Hewitt (1998)
6.9	High estimate of females reporting homosexual behaviour (review of studies conducted in Japan, Thailand, Denmark, France, Palau, Great Britain, and Australia from 1948 to 1991).	Diamond (1993)
6.0	High estimate of individuals reporting to be homosexual or bisexual since age 18 (probability sample of approximately 1500 people; nationally representative in the United States).	Smith (1991)
5.5	Males reporting homosexual behaviour (review of studies on homosexual behaviour from 1948 to 1991).	Diamond (1993)
5.3	Men reporting sexual activity with a same sex partner since age 18 (national probability surveys with 3941 respondents in the United States between 1989 and 1994).	Binson, Michaels, Stall, Coates, Gagnon and Catania (1995)
5.3	Male respondents who reported having same sex sexual activity (stratified random sample of ~4,300 Grade 8 to 12 students in Vermont).	Safe Schools Coalition of Washington (1999)
5.0	Low estimate of males having experienced some same sex sexual contact in adulthood (review of five probability surveys from 1970 to 1990 in the United States involving 8,857 participants).	Rogers and Turner (1991)
5.0	Low estimate of individuals reporting to be homosexual or bisexual since age 18 (probability sample of approximately 1500 people; nationally representative in the United States).	Smith (1991)
5.0	Women reporting having had frequent or ongoing homosexual experiences (cross sectional nationwide survey of American adults aged 18 and over).	Janus and Janus (1993)
4.5	Respondents who described themselves as GLB (Census study of 8,406 Grade 9 to 12 students in Seattle).	Safe Schools Coalition of Washington (1999)
4.0	Low estimate of predominant same sex orientation (review of Kinsey, Pomeroy and Martin (1948) and Laumann, Gagnon, Michael and Michales (1994) studies adjusting for possible risks involved in self-disclosure).	Gonsiorek, Sell and Weinrich (1995)
4.0	Men who were exclusively homosexual throughout their lives from adolescence on (5300 white males in the United States).	Kinsey, Pomeroy, and Martin (1948)
4.0	Males predominately or exclusively homosexual (white college-educated males).	Gebhard (1972)
4.0	Men reporting a same sex sexual partner in the previous five years (aged 16 to 50 years).	Taylor (1993)

Table 1 (Continued). Estimates of the Base Rate of Homosexuality and Bisexuality

Estimate of Percentage of Population that is Homosexual	Definition of Homosexuality (Sample Description)	Research Study
4.0	Respondents who described themselves as GLB and/or had same-gender experience (stratified random sample of 3,982 Grade 9 to 12 students in Massachusetts).	Safe Schools Coalition of Washington (1999)
3.7	Orientation given as bisexual or homosexual (telephone survey of 663 males using a national probability sample in the United States).	Harry (1990)
3.6	Average estimate of females reporting homosexual behaviour (review of studies conducted in the United States from 1948 to 1991).	Diamond (1993)
3.4	Female respondents who reported having same-gender sexual activity (stratified random sample of ~4,300 Grade 8 to 12 students in Vermont).	Safe Schools Coalition of Washington (1999)
3.3	Adult males reporting having had homosexual sex occasionally or fairly often at some point in their adult lives (data from National Opinion Research Center survey of 1450 males in the United States).	Fay, Turner, Klasser and Gagnon (1989)
3.0	High estimate of women who were exclusively homosexual throughout their lives from adolescence on (5940 white females in the United States).	Kinsey, Pomeroy and Martin (1948)
3.0	Females having a homosexual experience during more than three years of their lives (volunteer survey of 2036 people).	Hunt (1974)
3.0	Women reporting a same sex sexual partner in the previous five years (aged 16 to 50 years).	Taylor (1993)
2.8	Females reporting same-sex sexual partner in the last five years (2027 participants in the United States, France and the United Kingdom).	Sell, Wells and Wypij (1995)
2.8	Men reporting some level of homosexual (or bisexual) identity (random probability sample of 3432 men and women in the United States between the ages of 18 and 59).	Laumann, Gagnon, Michael and Michaels (1994)
2.5	Average estimate of females reporting homosexual behaviour (review of studies conducted in Japan, Thailand, Denmark, France, Palau, Great Britain, and Australia from 1948 to 1991).	Diamond (1993)
2.3	Males admitting to a same sex experience in the last ten years (3300 men aged 20 to 39 in the United States).	Billy, Tanfer, Grady and Klepinger (1993)
2.1	Self identified homosexual and bisexual Danish survey respondents (2460 Danish adults)	Ventegodt (1998)
2.0	Self identified gay men (40 Twin adult males in Washington, D.C.).	Hamer, Hu, Magnuson, Hu and Parratucci (1993)
1.5	Females predominately or exclusively homosexual (white college-educated females).	Gebhard (1972)
1.4	Women reporting some level of homosexual (or bisexual) identity (random probability sample of 3432 men and women in the United States between the ages of 18 and 59).	Laumann, Gagnon, Michael and Michaels (1994)
1.3	Men reporting same-sex partner (4066 males).	Pietropinto and Simenauer (1977)
1.1	Males admitting they were exclusively gay (national probability sample of 3321 men aged 20 to 39 in the United States).	Billy, Tanfer, Grady and Klepinger (1993)
1.1	Respondents describing themselves as bisexual, mostly homosexual or 100% homosexual (stratified random samples of 36,254 Grade 7 to 12 students in Minnesota).	Safe Schools Coalition of Washington (1999)
1.0	Low estimate of women who were exclusively homosexual throughout their lives from adolescence on (5,940 white females in the United States).	Kinsey, Pomeroy, and Martin (1948)
0.2	Low estimate of females reporting homosexual behaviour (review of studies conducted in Japan, Thailand, Denmark, France, Palau, Great Britain, and Australia from 1948 to 1991).	Diamond (1993)

Note: Studies differ in conceptual and operational definitions, methodology and response rates. Divergent estimates of the base rate of homosexuality probably result from whether research focused on sexual experience or sexual identity. In addition, studies estimating base rates assume: (1) everyone is conscious of his or her true sexual desires, (2) everyone's self reports can be trusted, (3) everyone is comfortable admitting them, and (4) everyone is able to fit himself or herself into researchers' commonsense categories of sexual orientation. Most GLB individuals will find it difficult to speak about their sexual behaviours and fantasies because of homophobia and repression (Stein, 1999). Because of these factors, the above studies most likely underreport the base rate of homosexuality.

For the purposes of the present literature review, two estimates of the base rate of homosexuality in the Canadian population were used. The low estimate was five percent, and the high estimate was ten percent. The rationales for choosing these three estimates are as follows:

- Five percent. This estimate is based on the median (n = 48 results; maximum = 37%; minimum = 0.2%) of the studies reviewed above. Homophobia results in an underreporting of homosexuality, and therefore five percent most likely represents a low estimate, but one that is based on existing research.
- Ten percent. This is the most commonly cited base rate for homosexuality and is originally based on Kinsey, Pomeroy and Martin's (1948 and 1953) research. Although Kinsey, Pomeroy and Martin's (1948 and 1953) studies were flawed, re-examinations of the data reveal that ten percent is still a likely base rate for homosexuality, especially given people's reticence to be honest about their sexuality in

research. It is entirely possible that the base rate of homosexuality is greater than ten percent; however, present research methodologies have not allowed the "hidden population" of GLB to be accurately counted.

Consistent with the five and ten percent estimates used in the present research, Bagley and Tremblay (1997b) also used the five and ten percent estimates for the base rate of homosexuality in the male population ("wholly or predominately homosexual" category). In addition, Hogg, Strathdee, Craib, O'Shaughnessy, Montaner and Schechter (1997) used three scenarios, based on extensive empirical evidence, for the base rate of homosexuality: three, six and nine percent of the population. Again, these estimates are similar to the ones used in the present research, and encompass both conservative and liberal estimates. For a detailed review of the measurement of sexual orientation see Gonsiorek, Sell and Weinrich (1995).

HEALTH AND SOCIAL ISSUES OF GAYS, LESBIANS AND BISEXUALS

Gays, lesbians and bisexuals face health risks and social problems that are not inherent in sexual orientation itself, but rather are due to society's negative responses (O'Hanlan, Lock, Robertson, Cabaj, Schatz & Nemrow, 1996; Coyle, 1993; Savin-Williams, 2001). Extensive research reveals that there are no differences between GLB and heterosexual people in levels of maturity, neuroticism, psychological adjustment, goal orientation, or self actualization (Bersoff & Ogden, 1991; Dancey, 1990; Freedman, 1971; Gartrell, 1981; Hart, Roback, Tittler, Weitz, Walston & McKee, 1978; Herek, 1990; Hooker, 1969; Kurdek & Schmitt, 1986; Pagelow, 1980; Peters & Cantrell, 1991; Ross, Paulsen & Stalstrom, 1988; Siegelman, 1979; Stokes, Kilman & Wanlass, 1983; Thompson, McCandless & Strickland, 1971). Yet there is a large discrepancy between the life expectancy of GLB and that of heterosexuals. Statistics Canada (2001f) reports that average life expectancy in 1990-1992 for Canadian males was 75 years and for Canadian females was 81 years. In a flawed study, Cameron, Cameron and Playfair (1998) found that the median age of death for homosexuals was less than 50 years; similar follow-up studies found median age of death of 42 years (Cameron, Playfair and Wellum, 1994) and 46 years (Cameron, 2002) for homosexual men. A more rigorous study by Hogg, Strathdee, Craib, O'Shaughnessy, Montaner and Schechter (1997) found that the life expectancy of 20 year old GB men in Vancouver was 34 to 46.3 years, as compared to 54.3 years for non-GLB 20 year old men (this equates to an overall life expectancy of 54 to 66.3 years).

Therefore, GLB life expectancy is significantly lower than the heterosexual population. There is evidence that this decreased life expectancy is due to increased levels of health and social problems faced by GLB.

Research and data in eight major health and social areas have been examined in this literature review: (1) suicide, (2) smoking, (3) alcohol abuse, (4) illicit drug use, (5) depression (6) unemployment, (7) murder, and (8) HIV/AIDS. The additional issue of access to health care and services was also examined even though no mortality analysis is presented. This is because homophobia often results in substandard services from health care providers (e.g., discrimination, misdiagnosis), which exacerbates the severity of health and social problems in GLB.

As described above, although there are many potential negative outcomes resultant from homophobia, the present literature review examined only eight of the major health and social issues. The issues under consideration were limited to issues where there was research or data available, and where a human impact could be estimated in some way. For example, there is evidence that GLB suffer higher incidences of eating disorders (Lee, 2000; Yager, Kurtzman, Landsverk & Wiesmeier, 1988) and cancer (Ungvarski & Grossman, 1999); however, there is insufficient data at the present time to make any useful mortality estimates. Related to this, there are many issues that related in some way to the issues discussed in the present review. For example, low self-esteem, shame, anxiety, mood disturbance,

demoralization and guilt are all likely outcomes of homophobia in GLB; however, they were not examined in detail in the present literature review because data did not exist on the human impact of those issues.

Calculation of Human Costs Estimates

The purpose of this literature review was to review the existing literature on homophobia, homophobia's effect on GLB, and estimate the human impact this effect has on Canada. Although approximate numbers are given for several health and social issues, it should be remembered that these estimates are very preliminary since there are many gaps in the research.

Also, many of the health and social issues discussed most likely have reciprocal relationships. To separate the number of premature deaths of each issue independent of all other issues is likely impossible. For example, it is not clear at this time whether unemployment causes, pre-determines or has any role in substance abuse, or alternately whether substance abuse causes, predetermines or has any role in unemployment. Another example is that alcoholism is a risk factor for suicide. Determining how many GLB suicides are due to alcoholism alone, how many are due to homophobia alone, and how many are due to a combination may never be known. As stated earlier, these two issues are likely interrelated and an exact cause-effect relationship cannot be determined; however, each issue can be separately examined. Because of the interrelationships among all of the issues, and because homophobia is likely not the sole cause of increased health and social problems in GLB, a grand total estimate of the human

impact of all of the issues can not be presented. Instead, a rough estimate of each individual issue was presented.

Given these caveats, the general method of calculating deaths was as follows:

Calculation of Rates. The relative GLB and heterosexual rates for particular health and social issues from existing literature were estimated (e.g., 25% of all Canadians smoke compared to 40% of GLB). Most commonly, two rates were used for GLB. The first rate was the percentage of the GLB population suffering from the particular problem. This was estimated using the median of several research studies. The second rate was the number of times greater the GLB rate was as compared to a heterosexual control sample. Not all studies reported this information, but for the studies that did the median was used. The Appendix shows the detailed calculations for each estimate presented.

Estimation of Total Human Cost. The total human lives lost in Canada as a result of each issue was estimated.

Number of GLB. The total number of GLB people in Canada was estimated and subtracted from the total Canadian population. This resulted in a total GLB population and a total heterosexual Canadian population. Two estimates of the base rate of homosexuality were used throughout (i.e., five percent and ten percent).

Number of Sufferers. Given the rates of the health and social problems estimated, the total number of GLB and heterosexuals suffering from the particular problem was estimated (e.g., 461,700 GLB smoke).

Equivalency of Rates. An assumption was made that, without the existence of homophobia and its deleterious effects, equivalent proportions of GLB and heterosexuals would be susceptible to the health and social issues reviewed.

Extra Sufferers. The total number of “extra” GLB sufferers of the particular health or social problem was estimated. This figure was calculated by multiplying the total number of GLB by the heterosexual rate of the health or social issue and subtracting this number from the actual number of GLB who suffer from the health or social issue.

Total Number of Deaths. The total number of premature deaths was estimated. This total number of deaths due to homophobia was obtained by multiplying the “extra” GLB sufferers by the overall death rate for each health and social issue.

It is important to note that the present literature review probably used conservative estimates of the human cost of homophobia, since limited information was available. For example, many suicides go unreported and the sexual orientation of many Canadians remains hidden. Although the current literature review focused on the number of deaths, the “human cost” of homophobia could also include the suffering of GLB and their friends and families (Rice, 1993).

Please keep in mind that some health and social issues lead to death only after long-term exposure. For example, recent smoking rates were used to calculate current deaths; however, current deaths would most likely be determined by smoking rates several years or even decades ago.

Therefore, all estimates in this literature review are simply that: estimates.

Suicide

General Population Statistics. Statistics Canada (2001i) data on suicides and suicide rates indicates that there were 3681 reported suicides in Canada in 1997; which means that suicide was the 11th leading cause of death (Statistics Canada, 2001e and 2001b). This represents a rate of 0.0123% or 12.3 per 100,000. Suicides accounted for 1.7% of all deaths in 1997. There were 8,626 deaths by unintentional injuries in 1997 and 1,163 deaths due to neurotic disorders, personality disorders and other non-psychotic mental disorders; many of these deaths could plausibly be unreported suicides, and therefore the 0.0123% rate is probably an underestimate.

Gay, Lesbian and Bisexual Statistics. Romero (1999) found a strong association between instances of homophobia experienced by gay men and thoughts of suicide. Psychological distress experienced by lesbians predicts suicidality (Morris, Waldo & Rothblum, 2001). Being GB in a hostile environment was found to be a risk factor for suicide in another study (Paul et al., 2002). Additionally, there is extensive research on rates of suicide attempts in GLB (see Tremblay (2000) for a review). Remafedi (1999a) reviewed six controlled, population-based surveys in the United States and Canada and found that in all six, attempted suicide rates were higher in GLB compared to their heterosexual peers. Table 2 summarizes the results from individual studies examining attempted suicide rates for GLB.

Table 2. Percentage of Gays, Lesbians and Bisexuals Who Attempt Suicide

Percentage of GLB who Attempted Suicide	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
66.1	n/a	221	Gay, lesbian and bisexual youth; mean age = 18.5 years; youth group attendees in United States and Canada.	Proctor and Groze (1994)
50.0	n/a	37	Mean age = ~ 17.0 years; United States.	Uribe and Harbeck (1992)
42.0	n/a	142	Gay and bisexual males; mean age = 19.2 years; United States youth groups.	D'Augelli and Hersberger (1993)
40.3	n/a	159	Gay and bisexual males; mean age ~ 19 years; United States and Canada youth groups.	Proctor and Groze (1994)
40.0	n/a	5,000	Homosexual men and women.	Jay and Young (1979)
39.0	n/a	138	Gay and bisexual males; mean age = 16.8 years; New York.	Rotheram-Borus, Hunter and Rosario (1994)
35.5	3.3 times	104	Homosexual and bisexual males and females; Massachusetts.	Garofalo et al., (1998)
35.3	n/a	34	Gay, lesbian and bisexual school students; United States.	Jordan, Vaughan and Woodworth (1997)
34.0	n/a	29	Gay and bisexual males; mean age = 18.3 years; United States.	Remafedi (1987)
32.1	4.5 times	28	Birth cohort study; age = 21 years; New Zealand.	Fergusson, Horwood and Beautrais (1999)
32.0	n/a	54	Gay, lesbian and bisexual youth; mean age ~ 18.5 years; United States.	Waldo, Hesson-McInnis and D'Augelli. (1998)
31.3	8.7 times	80	Males with male sex partner in lifetime; age range = 17 to 39 years; United States.	Cochran and Mays (2000a)
31.3	9.2 times	80	Males with male sex partner in lifetime; are range = 17 to 39 years; United States.	Cochran and Mays (2000a)
31.0	n/a	60	Gay and bisexual males; mean age = 20.0 years; United States.	Roesler and Deisher (1972)
31.0	3.4 times	129	Homosexual, bisexual and unsure males and females; mean age = 16.1 years; Massachusetts.	Garofalo et al., (1999)
30.0	n/a	137	Gay and bisexual males; mean age = 19.6 years; United States.	Remafedi, Farrow and Deisher (1991)
30.0	n/a	90	Gay, lesbian and bisexual youth; mean age ~ 18 years; United States.	Grossman and Kerner (1998)
30.0	n/a	239	Gay and bisexual males; mean age = 19.9 years; United States.	Remafedi (1994)
30.0	n/a	137	Homosexual respondents.	Remafedi, Farrow and Deisher (1991)
30.0	n/a	n/a	High estimate of gay and lesbian youth.	Whitcock (1988)
28.8	4 times	53	Gay and bisexual males; age range = 18 to 25 years; Australia.	Nicholas and Howard (1998)
28.1	7 times	~360	Gay and bisexual males; Minnesota.	Remafedi, French, Story, Resnick and Blum (1998)
27.5	2 times	113	Homosexual and bisexual sexually active males and females; Massachusetts.	Faulkner and Cranston (1998)
26.0	n/a	77	Gay and bisexual males; mean age ~ 23.5 years; Canada.	Magnuson (1992)
25.7	n/a	52	Gay, lesbian and bisexual youth; United States.	Hecht (1998)
25.0	n/a	28	Gays, lesbians and bisexuals; mean age ~ 23.0 years; United States.	Hammelman (1993)

Note: n/a = not available or not reported. 'X Times Heterosexual Control Sample' refers to the number of times higher the GLB sample suicide rate was compared to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to the paucity of information given in the original studies.

Table 2 (Continued). Percentage of Gays, Lesbians and Bisexuals Who Attempt Suicide

Percentage of GLB who Attempted Suicide	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
24.4	3 to 4 times	394	Gay and bisexual males and females; mean age = 14.9 years; Minnesota.	Saewyc, Bearinger, Heinz, Blum and Resnick (1998)
23.6	n/a	229	Gay and bisexual males; mean age = 33.0 years; Australia.	Kelly, Rapheal, Judd, Perdices, Kernutt, Burnett, Dunne and Burrows (1998)
22.8	n/a	139	Gay and bisexual males; mean age = 36.4 years; Switzerland.	Cochand and Bovet (1998)
21.0	n/a	500	Gay, lesbian and bisexual youth; mean age ~ 17.0 years; New York.	Martin and Hetrick (1988)
21.0	10.5 times	n/a	Black homosexual men.	Bell and Weinberg (1978)
20.0	n/a	108	Gay and bisexual males; mean age = 20.6 years; United States.	Schneider, Farberow and Kruks (1989)
20.0	n/a	141	Gay and bisexual males; mean age = ~ 17.0 years; Chicago.	Herdt and Boxer (1993)
20.0	n/a	20	Gay, lesbian and bisexual youth; United States.	Dohaney (1995)
20.0	n/a	108	Gay males.	Schneider, Farberow and Kruks (1989)
20.0	n/a	n/a	Low estimate of gay and lesbian youth.	Whitcock (1988)
19.3	5.4 times	3648	Males with male sex partner in lifetime; are range = 17 to 39 years; United States.	Cochran and Mays (2000a)
18.4	6 times	683	White and black gay and bisexual males; mean age = 36.0 years; United States.	Harry (1983)
18.0	n/a	1,898	Lesbians; age range = 17 to 80 years; all 50 American states.	Bradford, Ryan and Rothblum (1994)
15.5	3 times	82	Gay and bisexual, celibate males; mean age = 22.7 years; Canada.	Bagley and Tremblay (1997a)
14.4	5.8 times	575	White, gay and bisexual males; mean age = 36.0 years; United States.	Bell and Weinberg (1978)
12.4	2 times	137	Gay and bisexual males; mean age = 20.4 years; Belgium.	Vinke and van Heeringen (1998)
9.5	13.6 times	575	White, gay and bisexual males; mean age = 36.0 years; United States.	Bell and Weinberg (1978)
6.1	13.9 times	82	Gay and bisexual sexually active males; mean age = 22.7 years; Canada.	Bagley and Tremblay (1997a)

Note: n/a = not available or not reported. Note: 'X Times Heterosexual Control Sample' refers to the number of times higher the GLB sample suicide rate was compared to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to the paucity of information given in the original studies.

In addition to the above data, one particularly rigorous and methodologically sound study is of special note. In a study of 103 adult male twin pairs, Herrell, Goldberg, True, Ramakrishnan, Lyons, Eisen and Tsuang (1999) found the rate of suicide attempts was 6.5 times higher in the

twins reporting same-gender sexual orientation as compared to the twins reporting no same-gender sexual orientation. The higher rate was not explained by mental health, substance abuse, or the numerous unmeasured genetic and non-genetic familial factors

accounted for in the co-twin control design.

In addition to increased levels of suicide attempts, Kourany (1987), and Remafedi, Farrow and Deisher (1991) report that self-injurious acts of homosexual adolescents and adults were more serious and lethal, were of limited rescuability, and more often resulted in hospitalization than those of their heterosexual peers. Bagley and Tremblay (1997a) report that homosexually oriented males form the majority of hospitalizations, and probably deaths, resulting from suicide attempts.

Data on GLB completed suicides is less extensive than attempted suicide rates. Kroll and Warneke (1995), Gibson (1994) and Remafedi (1994) report that GLB youth account for 30% of completed youth suicides. Remafedi (1987), Schneider, Farberow and Kruks (1989), and Remafedi, Farrow and Deisher (1991) estimate that GLB teenagers account for 20% to 40% of all completed suicides. Bagley and Tremblay (1997a) reviewed twelve North American studies on suicide rates of gay and bisexual males and found that the suicide rate was approximately 31.3% in 1990. Preliminary research by Tremblay (1994, 1996) indicates that more than half of male youth suicide victims were homosexually oriented. Tremblay (1995) suggested that up to 50% of male youth suicide deaths might involve homosexually oriented males.

There are several problems associated with estimating the number of GLB who commit suicide (Halpert, 2002; Remafedi, 1999b; Remafedi, French, Story, Resnick & Blum, 1998; Remafedi, Farrow & Deisher, 1991):

- Coroners and medical examiners may not be told about the sexual orientation of the victim because

family members suppress that information; therefore, sexual orientation is not reflected in death certificates.

- Some GLB people suffering from the fear of homophobic attitudes may not have told anyone about their sexual orientation or about their intention to commit suicide due to a crisis related to sexual orientation. Many incidents, such as single vehicle automobile accidents, may be suicides incorrectly interpreted as accidents.
- Sexual orientation of suicide victims is difficult to obtain posthumously.
- Openly GLB individuals are only a subset of the GLB population, and so suicide rate results may not generalize to the entire GLB population.
- Attempted suicide behaviours and completed suicides represent somewhat different phenomena.
- The clustering of variables such as substance abuse, depression, and family dysfunction limits the ability to conclude that homophobia was the root cause of the suicideⁱⁱⁱ.

Bagley and Tremblay (1997a) conclude that most researchers have not yet acquired the skills needed to discover the homosexual orientation of GLB individuals after their suicide death; however, Garland and Ziegler (1993), Lewinsohn, Rohde and Seeley (1993), and Shafii, Carrigan, Whittinghill and Derick (1985) report that the best predictor of a completed suicide is a previous suicide attempt. Therefore, the rate of suicide attempts of GLB can be used as a validation of estimates of GLB suicide deaths.

There are three types of research upon which to estimate the suicide rate of GLB in Canada. The first is the direct

evidence, which indicates that approximately 30% of all suicides are GLB. The second is the attempted suicide rate. Of the 44 research studies reviewed, the median attempted suicide rate for GLB was approximately 28% (the mean was also 28%). The third is the number of times higher the GLB attempted suicide rate was from a heterosexual control sample. Of the 17 studies with such data, the median was 5.8 times and the mean was 6.5 times. Assuming that attempted suicides predict completed suicides, the attempted suicide rate of 28% can be used as an estimate of the suicide rate for GLB. Even if this number over estimates the number of completed suicides, the under-reporting of suicides, and especially GLB suicides, would tend to make this estimate more reasonable. Additionally, the estimate of 28% is congruent with the direct evidence suggesting 30% of completed suicides are GLB. In sum, two estimates, one relative to the heterosexual population (approximately six times the heterosexual rate) and one independent of the heterosexual population (30% of suicides are GLB) were used for suicide rates of GLB.

Human Impact. Table 3 is a summary of the four estimates of the total number of suicides in Canada related to homophobia (see the Appendix for detailed calculations). As can be seen, the estimates range from 818 to 968 deaths per year.

Smoking

General Population Statistics. Health Canada's (2000a) Canadian Tobacco Use Monitoring Survey

Table 3. Homophobia and Suicide: Four Estimates of Annual Deaths

Estimated Annual Number of Deaths (1997)	Method Used
968	5% base rate; 30% of completed suicides are GLB.
957	5% base rate; GLB suicide rate is 6 times the non-GLB rate.
818	10% base rate; 30% of completed suicides are GLB.
859	10% base rate; GLB suicide rate is 6 times the non-GLB rate.
<i>Range of Estimates = 818 to 968</i>	

Note: Base rate = percentage of the population that is GLB.

indicates that 25% (6.07 million out of a total of 24.3 million) of the 1999 Canadian population over 15 years of age were smokers^{iv}. Ellison, Mao and Gibbons (1995) estimated the number of deaths attributable to smoking for Canada in 2000 to be 46,910.

Gay, Lesbian and Bisexual Statistics. Table 4 is a summary of some of the research related to GLB smoking rates. Of the twelve studies reviewed, the median and mean GLB smoking rate was 38%. Based on the median of the five studies where that information was available, it was estimated that 1.6 times as many GLB smoked compared to heterosexuals^v. The Roberts and Sorensen (1999) study was excluded since it was a clear outlier in terms of GLB and heterosexual comparisons.

Table 4. Percentage of Gays, Lesbians and Bisexuals Who Smoke

Percentage of GLB Who Smoke	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
59.3	1.7 times	104	GLB youth reporting smoking cigarettes in last 30 days.	Garofalo et al. (1998)
47.8	n/a	2,593	Gay men reporting current smoking in Tucson, Arizona and Portland, Oregon.	Stall, Greenwood, Acree, Pau and Coates (1999)
45.3	n/a	548	HIV infected GB men in the United States.	Turner et al. (2001)
43.0	2.0 times	n/a	High estimate for lesbians reporting smoking cigarettes in the past month.	Lee (2000)
42.7	n/a	489	Lesbians in the Southern United States.	Skinner and Otis (1996)
40.0	n/a	n/a	Average of six studies in gay adult men.	Stall, Greenwood, Acree, Paul and Coates (1999)
38.0	1.7 times	n/a	Low estimate for lesbians reporting smoking cigarettes in the past month.	Lee (2000)
35.0	1.3 times	n/a	Gay men.	Lee (2000)
34.9	n/a	556	Gay men in the Southern United States.	Skinner and Otis (1996)
30.0	n/a	1,791	National American sample of lesbians indicating they smoked cigarettes daily.	Bradford, Ryan and Rothblum (1994)
22.9	1.3 times	105	Sexually active GL, Massachusetts high school students.	Faulkner and Cranston (1998)
20.1	-0.77 times	1633	American lesbians.	Roberts and Sorensen (1999)

Note: n/a = not available or not reported. Note: 'X Times Heterosexual Control Sample' refers to the number of times higher the GLB sample smoking rate was compared to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to the paucity of information given in the original studies.

Human Impact. Single, Robson, Xie and Rehm (1996) estimated that there were 33,498 tobacco-related deaths in 1992. Health Canada (1999, January) estimated that there were 45,214 deaths attributable to smoking in 1996 (an estimate of 45,000 deaths per year due to smoking was used for 1999). Smoking deaths accounted for 17% of total mortality and 16% of the total years of life lost due to any cause. Table 5 summarizes the four estimates of the number of deaths attributable to homophobia as related to smoking.

Table 5. Homophobia and Smoking: Four Estimates of Annual Deaths

Estimated Annual Number of Deaths (1999)	Method Used
1232	5% base rate; GLB smoking rate is 38%; non-GLB smoking rate is 24%.
1314	5% base rate; GLB smoking rate is 1.6 times the non-GLB smoking rate of 24%.
2599	10% base rate; GLB smoking rate is 38%; non-GLB smoking rate is 24%.
2548	10% base rate; GLB smoking rate is 1.6 times the non-GLB smoking rate of 24%.
<i>Range of Estimates = 1232 to 2599</i>	

Note: Base rate = percentage of the population that is GLB. See Appendix for calculations of GLB and non-GLB smoking rates.

Alcohol Abuse

General Population Statistics. WebMD Canada (1999) reports that 7% of the U.S. population suffers from alcoholism. While approximately 55% of Canadians consume one or more drinks per month (Statistics Canada, 2001a), the 1996-97 National Population Health Survey (Statistics Canada, 1998) found that 2.5% of Canadians reported drinking at levels associated with clinical dependence on alcohol. Single, Brewster, MacNeil, Hatcher and Trainor (1995) reported that 9.2% of adult Canadians reported having problems with their drinking. The Addiction Research Foundation (2001) estimated that 5% of the adult population was alcoholic, which was based on liver cirrhosis mortality and per capita alcohol consumption data. Adlaf, Ivis and Smart (1994) found that in a survey of Ontario adults, 5.3% met the alcohol dependence criteria. In a large survey, Grant, Harford, Dawson, Chou, Dufour, and Pickering (1994) found that 3% of American adults abused alcohol. Given the results described above, an estimate that 5% of the population suffers from alcoholism, alcohol abuse or problem drinking was used.

Gay, Lesbian and Bisexual Statistics. No studies have found a relationship between homosexuality itself and alcoholism (Small & Leach, 1977), yet several studies have found higher incidences of alcoholism in GLB. Some researchers contend that the alienation and isolation GLB experience as a result of society's rejection and oppression of homosexuality is the reason for this high incidence of alcoholism (Small & Leach, 1977; Ungvarski & Grossman, 1999; Weinberg

& Williams, 1974). Researchers also contend that alcohol related problems lose their intensity when the environment of GLB is not homophobic. Alderson (2001) cites evidence that not accepting one's homosexuality, which may be related to homophobia, may be causally related to the high incidence of alcohol abuse in the gay community. Williamson (2000) contends that internalized homophobia in GLB results in less effective coping strategies such as alcohol abuse. Johnson and Palermo (1985) believe the minority status of homosexuals itself is not the primary cause of alcoholism, but rather that the homophobia of individuals in treatment programs is the primary causal factor. This homophobia is manifested through behaviours such as refusal of services, non-helpful attitudes of treatment workers, and isolation of lesbianism as the problem with little attention directed toward alcoholism and results in effective treatment.

Table 6 summarizes the estimated incidence of alcohol abuse in GLB. Of the seventeen studies with such information, but not including the Gillow and Davis (1987) research that was not measuring alcohol abuse per se, the median incidence of alcohol abuse in GLB was 16% while the mean incidence was 18% (17% was used for the estimation calculations). In terms of the GLB rate relative to the heterosexual rate, the median of the seven studies with such data was 1.7 times. As stated previously, inconsistencies in sampling methods and criteria for alcoholism, and the invisibility of the GLB population greatly limits the generalizability of the research summarized above.

Table 6. Percentage of Gays, Lesbians and Bisexuals Who Abuse Alcohol

Percentage of GLB Who Abuse Alcohol	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
59.0	n/a	142	Lesbians reporting use of alcoholic beverages to cope with stress.	Gillow and Davis (1987)
35.0	7 times	n/a	Low estimate of incidence of alcoholism in lesbians from a review of four studies.	Johnson and Palermo (1985)
30.0	1.5 times	n/a	Problem drinking in homosexual population.	Barr, Greenberg and Dalton (1974)
29.4	n/a	2,497	Male homosexuals in the United States, the Netherlands and Denmark reporting drinking problems.	Weinberg and Williams (1974)
25.0	5 times	n/a	High estimate of incidence of alcoholism in lesbians from a review of four studies.	Johnson and Palermo (1985)
25.0	n/a	1,852	National American sample of lesbians.	Bradford, Ryan and Rothblum (1994)
23.0	2.9 times	748	Lesbians classified as having an alcohol problem in a Chicago sample.	McKirnan and Peterson (1989a) and McKirnan and Peterson (1989b)
23.0	1.4 times	2652	Gay men classified as having an alcohol problem in a Chicago sample.	McKirnan and Peterson (1989a and 1989b)
18.7	1.7 times	748	Male homosexuals aged 25 to 54 who exhibited frequent/heavy-drinking patterns.	Stall and Wiley (1988)
13.2	0.94 times	553	Gay male problem drinkers in the Southern United States.	Skinner and Otis (1996)
10.9	9.1 times	105	Sexually active GL, Massachusetts' high school students.	Faulkner and Cranston (1998)
10.6	1.4 times	98	Male homosexuals dependent on alcohol.	Cochran and Mays (2000b)
10.0	1.4 times	1055	Male and female homosexuals classified as problem drinkers in the Southern United States.	Skinner and Otis (1996)
9.0	n/a	561	Lesbians in New Zealand reporting alcohol use 5 to 7 times per week	Welch, Howden-Chapman and Collings (1998)
8.0	n/a	2172	Urban, American men who have sex with men reporting frequent/heavy alcohol use	Stall et al. (2001)
7.5	3.2 times	491	Lesbian problem drinkers in the Southern United States.	Skinner and Otis (1996)
7.0	3.2 times	96	Lesbians dependent on alcohol.	Cochran and Mays (2000b)
n/a	1.0 times (equal)	55	Homosexual and bisexual women reporting heavy alcohol consumption.	Bloomfield (1993)

Note: Operational definitions of alcohol abuse and homosexuality vary across the studies reviewed. n/a = not available or not reported. n/a = not available or not reported. 'X Times Heterosexual Control Sample' refers to the number of times higher the GLB sample alcohol abuse rate was compared to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to the paucity of information given in the original studies.

Human Impact. Single, Robson, Xie and Rehm (1996) examined the human costs of substance abuse in Canada, and found that there were 6701 deaths due to alcohol consumption in 1992. Gorsky, Schwartz and Dennis (1988) estimate that alcohol abuse is a factor in more than 10% of all deaths (e.g., traffic accidents, homicide, suicide,

etc.). Single, Rehm, Robson and Truong (2000) estimated that there were 6507 alcohol related deaths in 1995 and that the use and misuse of alcohol, tobacco and illicit drugs accounted for 20% of deaths, and 22.2% of years of potential life lost in Canada in 1995.

Since alcohol consumption rates remained stable from 1995 to 2000

Table 7. Homophobia and Alcohol Abuse: Four Estimates of Annual Deaths

Estimated Annual Number of Deaths (2000)	Method Used
875	5% base rate; GLB alcohol abuse rate is 17%; non-GLB alcohol abuse rate is 4.4%.
236	5% base rate; GLB alcohol abuse rate is 1.7 times the non-GLB alcohol abuse rate of 4.8%.
1843	10% base rate; GLB alcohol abuse rate is 17%; non-GLB alcohol abuse rate is 3.7%.
457	10% base rate; GLB alcohol abuse rate is 1.7 times the non-GLB alcohol abuse rate of 4.7%.
<i>Range of Estimates = 236 to 1843</i>	

Note: Base rate = percentage of the population that is GLB. See Appendix for calculations of GLB and non-GLB alcohol abuse rates.

(Brewers Association of Canada, 2002), an estimate of 6930 deaths per year was used (adjusted for population change since 1995). Table 7 shows the estimates of annual alcohol related deaths most likely attributable to homophobia.

Illicit Drug Use

General Population Statistics. The Canadian Health Network (1999) reported that 7.4% of Canadians used marijuana, 0.7% used cocaine, and 1.1% used LSD, speed or heroin. Citing data from the Centre for Addiction and Mental Health's monitoring studies, the City of Toronto Drug Prevention Centre (2000) reported that less than one percent of adult Canadians had used crack cocaine or heroin in the past year, ten percent had used marijuana in 1999, and one percent had used cocaine in 1998. No satisfactory method exists to

estimate the percentage of the Canadian population who use illicit drugs, since there are numerous types of illicit drugs, and individuals use different drugs in different combinations in different quantities over different amounts of time. Although combining the relative rates of marijuana, cocaine, heroin and other drug use is not ideal, for the present exploratory literature review a figure of 3.5% was used for the rate of illicit drug use in Canada. This represents the mean of the research results listed above; it also represents a conservative estimate, since it is known that more than this percentage of the population uses marijuana. However, as mentioned previously, drug use overlaps in individuals, and marijuana is most likely the least costly on society.

Gay, Lesbian and Bisexual Statistics. Research indicates that GLB have increased levels of illicit drug use compared to heterosexuals (Skinner, 1994), most likely as a result of minority stress (Ostrown, 2000). Table 8 is a summary of the individual studies of GLB illicit drug use rates.

Studies on the use of illicit drugs vary widely in terms of GLB rates. This most likely is a result of the differences in drugs used and the age of the study participants. Since the percentage of GLB who use illicit drugs varies so considerably, the only estimation used was the number of times higher the GLB rate was compared to the heterosexual rate. Of the sixteen studies with such data, the median was 2.6 times and the mean was 4.2 times. Since there were several outliers that unduly influenced the mean, the median rate of 2.6 times was used. This is most likely a

Table 8. Percentage of Gays, Lesbians and Bisexuals Who Use Illicit Drugs

Percentage of Gays, Lesbians or Bisexuals who use Illicit Drugs	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
58.0	n/a	29	Gay and bisexual male youths meeting criteria for substance abuse.	Remafedi (1987)
53.7	1.7 times	104	GLB reporting use of marijuana in last 30 days	Garofalo et al. (1998)
36.5	2.5 times	558	Gay men reporting marijuana use in the Southern United States.	Skinner and Otis (1996)
36.1	4.4 times	492	Lesbians reporting marijuana use in the Southern United States.	Skinner and Otis (1996)
35.8	1.6 times	324	GLB high school youth reporting heavy or high-risk drug use in the United States.	Safe Schools Coalition of Washington (1999)
35.0	3.2 times	n/a	High estimate of non-parenteral (ingested) substance abuse in GL	Council on Scientific Affairs (1996)
28.0	2.5 times	n/a	Low estimate of non-parenteral (ingested) substance abuse in GL	Council on Scientific Affairs (1996)
25.3	9.4 times	104	GLB reporting use of cocaine in last 30 days	Garofalo et al. (1998)
20.8	6.7 times	105	Sexually active GL Massachusetts high school students reporting using injection drugs at least once.	Faulkner and Cranston (1998)
18.9	n/a	2172	Urban, American men who have sex with men reporting frequent drug use	Stall et al. (2001)
14.0	n/a	1,917	Lesbians reporting using marijuana daily or more than once a week	Bradford, Ryan and Rothblum (1994)
13.3	19 times	105	Sexually active GL Massachusetts high school students reporting using cocaine 10 or more times.	Faulkner and Cranston (1998)
12.4	3.8 times	105	Sexually active GL Massachusetts high school students reporting using marijuana 40 or more times.	Faulkner and Cranston (1998)
11.0	1.2 times	748	GLB in Chicago reporting frequent use of marijuana .	McKirnan and Peterson (1989a and 1989b)
9.7	1.5 times	558	Gay men reporting cocaine use in the Southern United States.	Skinner and Otis (1996)
8.0	n/a	561	Lesbians in New Zealand reporting more than weekly use of marijuana	Welch et al. (1998).
7.1	2.6 times	492	Lesbians reporting cocaine use in the Southern United States.	Skinner and Otis (1996)
5.7	2.0 times	98	Homosexual men dependent on illicit drugs	Cochran and Mays (2000b)
5.0	3.8 times	96	Homosexual women dependent on illicit drugs	Cochran and Mays (2000b)
3.0	n/a	1,917	Lesbians reporting using cocaine more than once a week or more than once a month	Bradford, Ryan and Rothblum (1994)
2.3	3.3 times	2652	GLB in Chicago reporting frequent use of cocaine .	McKirnan and Peterson (1989a and 1989b)
2.3	n/a	208	Homosexual men (HIV positive and negative) indicating drug abuse / dependence	Williams et al. (1991)
n/a	2.5 times	168	GLBT and heterosexual youth in Seattle	Cochran, Stewart, Ginzler and Cauce (2002)

Note: Studies differ in operational definitions of illicit drug use and in the types of illicit drugs used. Also, youth and adult rates most likely differ in the GLB and heterosexual populations. n/a = not available or not reported. 'X Times Heterosexual Control Sample' refers to the number of times higher the GLB sample illicit drug abuse rate was compared to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to the paucity of information given in the original studies.

conservative estimate; however, given the inability to accurately estimate the GLB or heterosexual rate, it was the most reasonable.

Human Impact. Single, Robson, Xie and Rehm (1996) estimated that there were 732 illicit drug-related deaths in Canada in 1992. Single, Rehm, Robson and Truong (2000) estimated that there were 805 deaths in 1995 due to illicit drugs. Adjusting for population changes, an estimate of 857 deaths was used for estimating the number of annual deaths in Table 9.

Table 9. Homophobia and Illicit Drug Use: Two Estimates of Annual Deaths

Estimated Annual Number of Deaths (2000)	Method Used
64	5% base rate; GLB illicit drug use rate is 2.6 times the non-GLB illicit drug use rate of 3.2%.
74	10% base rate; GLB illicit drug use rate is 2.6 times the non-GLB illicit drug use rate of 3.0%.
<i>Range of Estimates = 64 to 74</i>	

Note: Base rate = percentage of the population that is GLB. See Appendix for calculations of GLB and non-GLB illicit drug rates.

Depression^{vi}

General Population Statistics. Naiman (2000) reported that 10% of the Canadian workforce suffers from mental illness, including depression. Statistics Canada (2001h) reported that in 1996-1997, approximately 1.32 million people or 4.4% of the population reported feeling depressed. The Mood Disorders Association of Manitoba (2001) found that depression and/or manic-depression (bipolar disorder) occurs in approximately 25% of all

women and 11% of all men in Canada at some point in their lives. Patten (2000) analyzed data from the Canadian National Population Health Survey in 1994-1995 and 1996-1997 and found the following prevalence rates for major depression: 5.2% (males 12 to 24 years old), 3.5% (males 25 to 44 years old), 3.5% (males 45 to 64 years old), 9.6% (females 12 to 24 years old), 8.6% (females 25 to 44 years old), 6.3% (females 45 to 64 years old), and 3.1% (females over 65 years old). Feightner (1994) estimates the prevalence of depression in the general population to be between 3.5% and 27% depending on the definition used and the population studied. Given these findings, an estimate of five percent was used as the percentage of the population suffering from depression. The Statistics Canada (2001h) and Patten (2000) studies were given more credence because they used Canadian population data and were based on methodologically sound research methods.

Gay, Lesbian and Bisexual Statistics. There is no evidence that GLB are any different to heterosexuals in their psychological stability and mental functioning (Ross, 1985). Vincke, De Rycke and Bolton (1999) found that chronic stress experienced by gay men lead to greater levels of depression. Most psychological problems experienced by GL are due to coping with the negative reaction if he/she is openly homosexual and coping with the anxieties of keeping sexual orientation hidden and fear of disclosure if he/she is not openly homosexual. Dempsey (1994) found that GL adolescents were likely to experience greater psychological dysfunction than non-GL peers. D'Augelli (1998) reported on the

negative mental health consequences of growing up in a climate of homophobic intolerance. Bell and Weinberg's (1978) study of 1500 men and women in San Francisco found that 56% of gay men (compared to 27% of heterosexual males) and 66% of lesbians (compared to 41% of a heterosexual female control group) reported having consulted a professional about emotional problems at some time in their lives. Morgan (1992) found that 78% of 100 sampled lesbians and 29% of 309 sampled heterosexual women reported having been in psychotherapy at some time in their lives. Matthews et al. (2002) found that 58% of their sample of 550 lesbians had been treated for depression (compared to 52% of heterosexual women). Simonsen, Blazina & Watkins (2000) found that gender role conflict was correlated with depression in a sample of 117 gay men. Table 10 (next page) reviews the research on depression in GLB.

The median percentage of GLB suffering from depression from the research summarized above was 15.3%. Based on the studies that had such information, GLB are 2.15 times more likely to suffer from depression than heterosexuals.

Human Impact. There is substantial evidence that major depression is a risk factor for non-suicide mortality even when controlling for other factors (Schulz et al., 2000; Penninx et al., 1999; Schulz et al., 2002; Pulska, Pahkala, Laippala & Kivela, 1997, 1998a, 1998b, 1999, 2000; Ziegelstein, 2001). Penninx et al. (2001) found that major depression increased the risk for cardiac mortality by almost 3 times. Newman (2003) found that the mortality rate of individuals suffering

from depression was 2.3 times higher than the average rate (although 29% of these deaths were attributed to suicide). Wulsin (2000) cites a robust study that found that depression increased mortality by 24% six years after a baseline measure was taken.

Although it is clear that depression increases mortality, even when controlling for factors like smoking, physical illness and alcohol consumption, there was insufficient data to reliably calculate human cost figures for the present literature review.

Unemployment

General Population Statistics. Statistics Canada (2001c and 2001g) data on the Labour Force indicate that in the year 2000, out of the total labour force of 15,999,200 people, 6.81% or 1,089,600 were unemployed.

Gay, Lesbian and Bisexual Statistics. There is some evidence that GLB have a higher unemployment rate than heterosexuals (Fastfax, 2000). Pagelow (1980) describes the problems incurred by GLB in attaining and maintaining employment (e.g., subject to coercion and blackballing, paranoia, constant anxiety). Bradford, Ryan and Rothblum (1994) found that thirteen percent of their national American sample of 1,917 lesbians had lost their jobs because of anti-gay discrimination. The Glasgow Women's Library (1999) reported that forty-two percent of unemployed GL survey respondents perceived that their unemployment was related to their sexuality, and twenty percent of respondents stated that they had had to leave employment or had been refused work due to their sexuality or the homophobia of others.

Table 10. Percentage of Gays, Lesbians and Bisexuals Who Suffer From Depression

Percentage of GLB Suffering from Depression	X Times Heterosexual Control Sample	Number of Participants Involved in Study	Sample Description	Research Study
71.4	1.9 times	28	Gay, lesbians and bisexual New Zealanders (aged 14 to 21 years) in a 21-year longitudinal study suffering from major depression.	Ferguson, Horwood and Beautrais (1999)
37.0	n/a	1,925	National American survey of lesbians reporting having suffered from depression sometime in the past.	Bradford, Ryan and Rothblum (1994)
30.0	n/a	n/a	National American sample of lesbians reporting having been in therapy for depression.	Sorensen and Roberts (1993)
15.3	2.4 times	78	Men reporting same-sex sexual partners meeting the criteria for major depression.	Cochran and Mays (2000a)
15.0	1.8 times	96	Homosexual women suffering from major depression.	Cochran and Mays (2000b)
13.3	3.0 times	98	Homosexual men suffering from major depression.	Cochran and Mays (2000b)
11.0	n/a	1,925	National American survey of lesbians currently suffering from major depression.	Bradford, Ryan and Rothblum (1994)

Note: The disparity in the Ferguson, Horwood and Beautrais (1999) study was not associated with any significant differences in social, family, or childhood backgrounds. n/a = not available or not reported. 'X Times Heterosexual Control Sample' refers to the number of times higher the GLB sample depression rate was compared to a control sample of heterosexuals used in the study. Heterosexual control group sample characteristics are not described due to the paucity of information given in the original studies.

Skinner and Otis (1996) found that 3.5% of their sample of 1067 GLB were unemployed, although no comparison data was reported. Based on data from the 1996 New Zealand census, Byrne (1997) reported that the unemployment rate was 1.32 times higher for lesbians as compared to heterosexual women (6.2% versus 4.7%) and 1.38 times higher for gay men as compared to heterosexual men (5.5% versus 4.0%). Mutchler and Freeman (1999) found that 25.4% of their sample of GLB in Los Angeles were unemployed.

High school dropout exacerbates employment problems of GLB because education is related to employability. Remafedi (1994) cited an American study that found the high-school dropout rate for GLB youth was 28% compared to 9% for their heterosexual counterparts. This is primarily due to discrimination (e.g., verbal and physical harassment) of GLB young people by peers (Roberts & Sorensen, 1995) and the isolation many GLB feel (Rivers, 2000). Remafedi (1987) found that 28%

of his sample of 29 GB male teenagers had dropped out of high school.

There was minimal data on the unemployment rate of GLB in Canada; therefore, no estimation was calculated based on GLB unemployment rates.

Human Impact. There is evidence that mortality rates among the unemployed are higher than among the employed (Iverson, Andersen, Andersen, Christoffersen & Keiding, 1987; Martikainen, 1990; Morris, Cook & Shaper, 1994; Moser, Fox & Jones, 1984). However, since little information exists to estimate the unemployment rate of GLB in Canada, no valid estimate of the number of premature deaths most likely caused by homophobia could be calculated.

Murder

General Population Statistics. In Canada, there were 554 homicides in 2001 and 546 in 2000 (Statistics Canada, 2002).

Gay, Lesbian and Bisexual Statistics. Otis and Skinner (1996) reported several studies that show hate crimes against gay men and lesbians increased substantially from the early 1980s to the early 1990s. Roberts (1995) reported that eleven percent of all hate crimes are directed against gays and lesbians. Evidence of physical and verbal assaults against GLB is well documented (Herek, Gillis & Cogan, 1999; Telljohann & Price, 1993; Savin-Williams, 1994; Herek, 1993; Berrill, 1990; Barnes & Ephross, 1994; Glasgow Women's Library, 1999; Lee, 2000; Hunter, 1990; Bradford, Ryan & Rothblum, 1994; Samis, 1995; Faulkner & Cranston, 1998; Faulkner, 1997; Smith, 1993a; New Brunswick Coalition for Human Right Reform, 1990; Warwick, Aggleton & Douglas, 2001; Morrow, 2001; Balsam, 2001; D'Augelli & Grossman, 2001). Murder motivated by homophobia in Canada is less well documented. However, anti-gay murder statistics have been reported for Brazil (169 murders in 1999); Minnesota (between 120 and 180 murders between 1969 and 2002); and New South Wales, Australia (37 murders between 1989 and 1999) (Wockner, 2000; Minnesota Gay Homicide Study, 2000; Mouzos & Thompson, 2000). Cameron, Playfair and Wellum (1994) found that homosexual men were more frequently murdered than men in general based on US obituaries. There was insufficient scientifically based data to estimate the number of anti-GLB murders in Canada.

Human Impact. It is clear that GLB are subject to hate crimes, including substantial physical violence. It can be assumed that there are anti-gay murders in Canada; however, there was insignificant evidence to warrant any

estimations of the human cost of homicides caused by homophobia.

HIV/AIDS

General Population Statistics. Health Canada (1999a) reported the HIV and AIDS cases and exposure categories shown in Table 11. In terms of risky sexual behaviour, Health Canada (1999b) reported in 1994 that 26% of men and 19% of women always used condoms with non-regular partners. In addition, in 1997, 27.7% of men and 28.1% of women did not use a condom the last time they had sexual intercourse with a non-regular partner.

Health Canada (2000b) reported that there were 107 AIDS-related deaths in 1999, which is down substantially from the 1,422 reported in 1995. However, due to reporting delays and under-reporting for both AIDS cases and deaths among AIDS cases, this estimation may be lower than the actual number of AIDS-related deaths.

Gay, Lesbian and Bisexual Statistics. Health Canada (1996) reported that GLB youth have a higher risk of HIV infection than the general youth population. As can be seen in Table 11, homosexual contact (men who have sex with men) accounted for 52.2 percent of AIDS cases and 25.0 percent of HIV cases in 1997. Although GLB could have constituted a proportion of the HIV and AIDS cases in other exposure categories (e.g., occupational exposure), this proportion would be small.

There are several reasons for the increased rates of HIV and AIDS in GLB. First, as was demonstrated previously, GLB use illicit drugs and abuse alcohol at higher rates than the heterosexual population. Research shows that heavy alcohol and drug

users more often engage in unsafe sex and therefore contract HIV/AIDS (Ostrow, 2000; Rosenberg et al., 2001).

Second, Meyer and Dean (1996) and O'Hanlan, Lock, Robertson, Cabaj, Schatz and Nemrow (1996) reported that GLB with higher internalized homophobia engaged in risky sexual behaviours at a greater rate than GLB with lower internalized homophobia. Additionally, Williamson (2000) reported that GLB with higher internalized homophobia were less affiliated with the gay community and therefore had less access to safer sex information and resources.

Third, Peersman, Sogolow and Harden (2000) reported that people who live at the margins of mainstream society, including GLB, are more vulnerable to HIV/AIDS infection. In particular, men who have sex with men are at an exceedingly high risk for HIV infection (Johnson & Peersman, 2000), and HIV has disproportionately affected the gay community, which has led to even greater stigmatization (Ostrow, 2000). Graham, Kirscht, Kessler and Graham (1998) found that negative life events, depression and anxiety were predictors of risky sexual behaviours.

Finally, Leserman, Petitto, Golden, Gaynes, Gu, Perkins, Silva, Folds and Evans (2000) found that stressful life events, depression, and dissatisfaction with social support were associated with an increased risk of contracting AIDS and the progression of HIV. Kelly (2002) found that reducing risky sexual behaviour in GB men hinged partly on positive self-esteem and pride, which can be negatively affected by homophobic attitudes and behaviours.

Human Impact^{vii}. HIV infection was the 15th leading cause of death in Canada in 1997 (Statistics Canada, 2001e). However, it would not be valid to estimate the human impact of homophobia as it relates to HIV/AIDS because there is no way to equate GLB and heterosexuals. This is because risky sexual behaviour cannot be conclusively linked to homophobia. Unsafe sexual practices were prevalent in both the GLB and the heterosexual populations when the HIV/AIDS epidemic first appeared. Although homophobia probably contributes to risky sexual behaviour and thus increased incidences of HIV/AIDS in the GLB population, any human cost estimates would be futile at this time. Interestingly, non-GLB individuals with a negative attitude toward GLB are more likely to exhibit risky sexual behaviours because they believe HIV/AIDS is a "gay disease," indicating that homophobia may be costing lives in the non-GLB population also (Burkholder, Harlow & Washkwich, 1999). Fear of homosexual association also prevents some individuals from pursuing sources of information about AIDS or practicing safe sex (Edgar, Freimuth & Hammond, 1988).

Although homophobia may not be directly linked to the acquisition of HIV/AIDS, Nott and Vedhara (1999) found that stresses faced by homosexual men might play a role in the progression of HIV. In addition, internalized homophobia has predicted distress levels in HIV-positive men (Wagner, Brondolo & Rabkin, 1996).

Table 11. AIDS and HIV Cases in Canada for 1997

Exposure Category	1,966 Total HIV Cases (%)	632 Total AIDS Cases (%)
No identified risk factor	33.5	3.6
Men who have sex with men	25.0	52.2
Injecting drug use	22.1	15.3
Heterosexual contact	14.5	17.7
Men who have sex with men and injecting drug use	1.6	4.1
Perinatal	1.4	--
Other	1.2	--
Recipient of blood or clotting factor	0.8	2.2
Occupational exposure	--	0.2
No identified risk - heterosexual	--	4.6
Total	100.0	100.0

Note: The category "Men who have sex with men" may include individuals who do not label themselves as GB.

Corollary Issue: Access to Quality Health Care and Services

An additional issue faced by GLB is the effect of prejudice, discrimination and inadvertent or purposeful alienation by the social and health care communities (O'Hanlan, 1995). This result of homophobia in the health care sector worsens the effect of homophobia because increased rates of health and social problems in GLB are not treated properly or effectively, which can often lead to premature mortality. GLB have special health needs (Waugh, 1996); listed below are some examples of the additional burdens and issues faced by GLB because of homophobia in health care services^{viii}:

- The existence of homophobia in counselors can interfere with counseling, lead to inappropriate choices of treatment modality and treatment goals, result in minimizing the importance of the client's sexual orientation and the negative effects of heterosexism, viewing homosexual orientation as the pathological underlying cause of

all of the client's problems, and generally reduces the success of substance abuse treatment programs (Berkman & Zinberg, 1997; Hall, 1990).

- Gentry (1992), Lee (2000), Jones and Gabriel (1999), Baker (1993), McGarry, Clarke and Cyr (2000), Kroll and Warneke (1995), Roberts and Sorensen (1995), Savin-Williams (1994), and Shelby (1999) report that health care providers rarely ask about sexual orientation (i.e., heterosexuality is assumed).
- Many health care professionals are unaware of the unique health care issues related to GLB health care (Ungvarski & Grossman, 1999; Lee, 2000; Mitchell, 2000).
- GLB often delay or decline seeking medical assistance, including routine preventative health care, because of fear of ridicule, abuse, doctor prejudice, discrimination, disclosing of sexual orientation to friends and family, exploitation, rejection, neglect, and unconcern (Godin, Naccache & Pelletier, 2000; Stevens, 1994; Gentry, 1992; Wagner,

1997; Sussman-Skalka, 2001; Stevens & Hall, 1988).

- The fears described above are demonstrated in research by Dardick and Grady (1980) who found that less than 50% of openly homosexual men had told their primary health care provider that they were gay, while Johnson and Palermo (1985) found that only 18% of women studied had revealed their sexual orientation to a physician.
- Roberts and Sorensen (1995) and Ryan, Brotman and Rowe (2000) reviewed several studies and found that health care providers consistently demonstrated negative attitudes and behaviours (e.g., embarrassment, anxiety, pity, disgust, revulsion, hostility, rejection, condescension) and discomfort treating GLB. Also, lesbians consistently reported fear that their quality of health care would be affected if they disclosed their sexuality. It was also found that the discomfort of both health care providers and patients could lead to a lack of sharing information, delay in care for illnesses and reluctance to have routine health promotion visits.
- Schatz and O'Hanlan (1994) report that two-thirds of 700 physicians knew patients who were denied or given substandard care by physicians because of their sexual orientation. Trezza (1994) also reports homophobia was the largest predictor of stigmatization of persons infected with AIDS in counseling psychologists (although Lawrence et al. (1990) did not replicate these findings).
- Nystrom (1997) reported that 25% of 1500 GLB and trans-gendered respondents who had seen a mental health provider in the last 12 months said that they had at some time in their lives received "poor or inappropriate mental health services because of [their] sexual orientation.
- Carter et al. (1996) found that more homophobic medical students were less willing to treat HIV-positive patients than less homophobic students.
- Stevens and Hall (1991) cite several examples of lesbians' negative experiences in health care settings and subsequent delay in seeking treatment. Stigmatization results in GLB reluctance to seek health care or communicate openly in health care encounters. Stevens (1994) found that 44% of the 45 lesbians interviewed did not feel safe enough or respected enough to continue contact with health care providers.
- Evans, Ferrando, Rabkin & Fishman (2000) report that attitudes towards physicians and other health care professionals is associated with critical treatment decisions in HIV-positive men.
- Brogan, Frank, Elon and Sivanesan (1999) described the harassment of lesbians during medical education and medical practice, which may discourage many lesbians from becoming physicians and providing the empathetic care needed by many lesbian patients. The absence of GLB in the health care system also allows prejudice and misinformation to flourish (Shelby, 1999).
- Siminoff et al., (1998) found that greater homophobia in a sample of nurses was negatively related to quality of psychosocial care.
- The quality of relationship with a physician is highly related to overall quality of life and treatment adherence (Heckman et al., 1998).

SUMMARY OF HUMAN IMPACT ESTIMATES

Table 12 is a summary of the estimates of the human impact of homophobia on Canada.

Table 12. Estimations of the Annual Human Impact of Homophobia on Canada

Health or Social Issue	Year Estimated	Number of Deaths	
		Low Estimate	High Estimate
Suicide	1997	818	968
Smoking	1999	1232	2599
Alcohol Abuse	2000	236	1843
Illicit Drug Use	2000	64	74

There were five issues for which a human impact analysis was not feasible: depression, unemployment, murder, HIV/AIDS and access to quality health care and services. There was evidence that GLB suffer higher rates of depression and that depression leads to increased mortality rates; however, there was insufficient data to make any valid estimations of the human cost of homophobia.

Although there was some research indicating that a greater percentage of GLB are unemployed compared to heterosexuals, and that unemployment leads to premature mortality, there was insufficient data to

calculate the GLB unemployment rate in Canada.

There was clear evidence that GLB are victims of physical violence at a much higher rate than the heterosexual population; however, there were limited estimations of the number of anti-homosexual homicides that occur in Canada.

The GB male population has been hit especially hard by the HIV/AIDS epidemic; however, it cannot be assumed that GLB and heterosexual populations would have equivalent rates of infection without the presence of homophobia. This is because of the transmission routes of the disease, the concentration of the epidemic in the GB male community in the early stages of the epidemic, and the inability to separate GLB from the injectable drug user exposure category.

Research clearly demonstrates that homophobia results in substandard health care for GLB, and that GLB do not properly access and use the health care system because of homophobia. This problem intensifies the problems faced by GLB and undoubtedly adds substantially to the number of homophobia related deaths in Canada; however, no human cost estimates were made since insufficient data existed.

LIMITATIONS

Literature Review

The present literature review has several limitations, which are discussed below:

Exploratory Nature of the Review. A review connecting homophobia, homophobia's impact on GLB health and the resultant human impact has not been attempted before. As with any exploratory attempt that is not firmly established in the research, there is little precedent and little opportunity to learn from previous work.

Human Costs are Estimations Only. The appraisal of the economic costs of certain health and social issues has increased in the last few years (Goeree, O'Brien, Blackhouse, Agro & Goering, 1999). In addition, estimations of the number of deaths attributable to certain health and social issues also exist. Both types of appraisals are simply estimations, since the exact economic and human costs cannot be known. These cost estimates are not scientifically determinable because there is a considerable amount of unknown information in the area of homophobia, homosexuality, and the impact of health and social issues on GLB. Also, many health and social issues lead to death only after long-term exposure. For example, recent alcohol abuse rates were used to calculate current deaths; however, current deaths would most likely be determined by alcohol abuse rates several years before deaths occurred, since alcohol abuse has long-term negative consequences. Several mortality estimates were offered in the present literature review. The approximations and estimates given

were meant to raise awareness of the relevant issues, point to future research that is needed, and to give a general sense of the human cost of homophobia on Canadian society.

Generalizability of Research. Some of the data and research reviewed in the present review has been culled from American and European sources from the past 30 years. The results from these studies are not directly generalizable to Canada in the present time period. However, these studies are very similar to the results of Canadian studies, and, in addition, since most of the results were fairly consistent across time and throughout different geographic areas, they supported the Canadian results. More generally, Canada, the United States and European countries have much in common, including similar standards of living, GLB-related laws, economic conditions, and health care practices and standards that make generalizing research among these countries relatively sound from a research perspective.

Synthesizing of Research. The present literature review combines studies that vary considerably in their definitions, methodologies, results and conclusions. For example, dozens of articles related to attempted suicide rates in GLB were reviewed. A median or mean rate was calculated from those studies; however, each study differed in terms of how an "attempted suicide" was defined, how "homosexuality" was defined, and the sample from which the data was collected. Combining the results across these studies is problematic; however, since the median or mean rate from among those studies was used, the

research that tended to underestimate rates and the research that tended to overestimate rates would have balanced each other. Although “true” rates can probably never be known for the various health and social issues reviewed in this document, the methodology used is the best available alternative.

Non-Weighting of Research. A median or mean estimate for the different rates of health and social problems experienced by GLB was used to calculate the human cost of homophobia. No extra weighting was given to studies of higher quality (e.g., methodologically sound, using samples representative of the population) or studies with larger sample sizes, which could be considered a weakness of the present review. A decision was made to equally weight all the individual studies; therefore, using the median or mean was the appropriate methodology. A benefit of this approach is that the median would tend to eliminate results that represented outliers in the research.

Overgeneralization of Research. Since there are large gaps in the literature, overgeneralization is another difficulty with the present review. For example, few studies have directly linked homophobia with increased health and social problems in GLB. The major assumption of the present literature review is that homophobia is the primary cause of increased incidences of health and social problems in GLB. Also, mortality estimates of various health and social issues were usually meant to be applied to the Canadian population as a whole, and not specifically to the GLB population. Generalizations based on limited

research and applied to specific sub-populations is problematic.

Diversity of GLB Populations. Obtaining research examining homosexual males, homosexual females, bisexual males and bisexual females separately was very difficult. Although these groups represent distinct and diverse populations with unique issues, the present review treated research exploring these different groups as homogenous. The reason for examining the communities collectively was for brevity and, for the sake of presenting an initial exploratory review of the area, no attempt was made to uncover any differences between those groups at this time. This limits the degree of specific conclusions that can be made about the relative impact of homophobia on those different groups.

Variables Unaccounted For. Related to the generalization problem is that the GLB population (or more accurately the GLB sample used to generalize to the GLB population) studied in much of the research reviewed could have been different than the heterosexual Canadian population in ways that could account for the increased health and social issue rates in GLB. For example, the GLB samples studied could have been different in terms of socio-economic status than the heterosexual control samples in many studies. This itself could account for increased health problems in GLB. Whether homophobia is partly or wholly responsible for pre-mature deaths of GLB is not known at this time^{ix}.

Even given these real and potential limitations with the present review, there are several beneficial outcomes. First, even if skeptics do not

accept that homophobia is the principal determinant of increased rates of health and social problems in GLB, the fact that these increased health and social problems are strongly evident in the literature is an important finding itself. Second, this review may be an impetus to conduct further research in the area. Third, efforts aimed at the elimination of homophobia, including better access to health care and more appropriate and sensitive health care services for the GLB population, may be taken as a greater priority given its human impact on all of Canada.

Research Reviewed

Conclusions based on literature reviews are only as good as the availability of quality research in the area. Put another way, the information summarized in this review suffers from the same limitations of the research reviewed. Instead of discussing the weaknesses of the individual research studies that were studied, general limitations are discussed below for the sake of brevity. In general, the following limitations were observed in some or most of the research reviewed:

Small Sample Sizes. Research that collected data from a relatively small number of GLB subjects reduced the ability to generalize to broader populations and reduced the ability to detect any differences with heterosexual populations (e.g., Remafedi, 1987). Also, studies that compared homosexual and heterosexual samples but did not match participants according to race, age, income, location or education decreased the ability to conclude that unmeasured, systematic differences between the two groups were not the reason for the observed differences.

Respondents Declining to Participate. Research in which potential participants declined to respond could have biased the results. That is, low response rates to surveys could result in a selection bias, which could result in an under or over reporting of the phenomena under study.

Clinical Samples. GLB samples drawn from clinical samples probably do not represent the total GLB population. Also, studies using psychiatric histories as a data source may under-report certain self-destructive behaviours such as suicide attempts. This is because older individuals may not recall or interpret early self-destructive behaviours as suicide attempts during a psychiatric interview focusing on lifetime symptoms.

Under-representation of Certain Groups. Research conducted on white males, which constituted a large portion of the research reviewed, under represented ethnic GLB, and white lesbians and bisexuals. This under-representation could have biased the results. For example, research has shown that males and females have different timelines for “coming out” (D’Augelli & Hershberger, 1993) and that there is a greater condemnatory orientation toward homosexuality in the black community compared to the white community (Ernst, Francis, Nevels & Lemeh, 1991).

Cross-sectional Designs. Research that was cross-sectional in design could only examine the association between homophobia, sexual orientation and increased rates of health and social issues; however, no definitive conclusions about causality can be made

from cross-sectional designs. Also, cross-sectional data does not allow information to be gleaned about changes over time.

Self-report Designs. Data gathered using self-report techniques does not allow the researchers to know whether respondents under-reported or over-reported the existence or frequency of health and social issues. More specifically, sexual orientation data gathered using self-report instruments is problematic. Even when anonymous techniques are employed, social stigma probably prevents many respondents from self-identifying as GLB. It is likely that self-report techniques under-report GLB orientation.

Convenience Samples. Samples drawn from convenience and opportunistic (e.g., snow-ball) samples and non-randomized samples reduces the ability to generalize the results. For example, some researchers that reported elevated rates of alcohol abuse drew their samples from bar-patrons.

Samples from Specific Geographic Areas. Data gathered from specific geographic areas reduces the generalizability of the results to other geographic areas. One reason for this is because communities vary in their acceptance of GLB.

Disclosure of Orientation and Health and Social Problems. It is unknown whether a willingness to disclose sexual orientation (socially stigmatizing information) is positively associated with a similar willingness to disclose health and social problems. If this relationship exists, it would tend to over-estimate health and social problems in GLB.

Response Bias. Research has not been able to uncover whether elevated levels of health and social problems in GLB are due to stigmatization and psychosocial stress related to homophobia, or whether they are due to differences in response bias in which there is possibly a lower threshold among GLB for reporting such problems.

Consistency of Definitions. In general, GLB and health and social research lacks consistent conceptual and operational definitions and standardized measures. This is especially true for the definition of sexual orientation (e.g., definitions of homosexuality can be based on behaviour, desire or identity).

Differences Among Age Groups. Different studies focusing on particular age groups (e.g., youth between 12 and 16) had inconsistent definitions of the age groups (e.g., one study defined youth as persons under age 24). An additional problem is that different age groups may face varying levels of homophobia, stress, and health and social problems. This precludes any strong synthesizing conclusions being made about the results of those studies. In suicide research, it is unknown whether the risk of suicide peaks at adolescence or remains constant through out the life cycle, which makes any generalizations from youth suicide studies to the adult population, or vice-versa, problematic.

Cohort Effects. Most studies did not attempt to account for any cohort effects that may have been operating. That is, there may be greater acceptance of GLB over time, which may encourage

more openness, at earlier ages, about sexual orientation.

Social Desirability. Social desirability could have resulted in participants under-reporting their sexual orientation, homophobia, or illegal / stigmatized behaviours. Researchers can only make conclusions about GLB who have already self-identified as GLB in their studies.

Unmeasured, Overlapping and Confounding Variables, and Temporal and Causal Order of Variables. The interpretation of the causal and temporal role of psychological and social stress related to homosexuality and health and social issues (e.g., illicit drug use, depression) is unclear due to possible confounds. For example, does homophobia cause stress that results in substance abuse and ultimately suicide? Or does substance abuse confound the relationship between stress and suicide? Other unanswered questions include: Do higher rates of alcohol abuse in GLB

result from the stress of coping with homophobia? Or do higher rates of alcohol abuse in GLB result from the fact that many GLB feel bars are the only safe place to meet and gather, with alcohol abuse being an outcome of the amount of time spent in bars? In addition, increased rates of health problems in GLB could be the result of an unmeasured factor, unrelated to homophobia, such as childhood abuse. Another example is that internalized homophobia overlaps with several other relevant concepts such as self-esteem (Williamson, 2000). Many studies do not account for the possibility that variables overlap with each other.

Real Versus Perceived Homophobia. Negative effects of homophobia could be primarily caused by inaccurate perceptions by GLB, and not as a result of actual behaviours by others (Frable, Wortman & Joseph, 1997).

FURTHER RESEARCH NEEDED

There are numerous indicators that the increased incidence of health and social problems found in the GLB population are related to the stigma and shame associated with living in a homophobic society (Ryan, Brotman & Rowe, 2000), yet there is a shortage of rigorous research exploring this problem directly.

HIV/AIDS is often the focus of the health of GLB individuals^x; however, there is a myriad of other health and social issues affecting the GLB population that receive far less attention (Rofes, 2000; Ryan, Brotman & Rowe, 2000). Many of these health and social issues are related to the effect of homophobia (e.g., alcohol abuse,

smoking, guilt, shame, depression). Policy makers are slowly beginning to incorporate research on the impact of stigmatization and prejudice on GLB health and mortality (Saunders, 2000), but research needs to be conducted on the motivations of homophobia, the specific cognitive processes associated with homophobia, the specific adverse effects of homophobia on GLB, the causal direction of these effects, the differential effects on different subpopulations of GLB, and which prevention efforts are effective in reducing homophobia^{xi} and its effects on GLB.

METHODOLOGICAL IMPROVEMENTS NEEDED

Concomitant with the research suggested above, several researchers have recommended methodological improvements to research in the area of homophobia and GLB health and social issues. Some suggestions include:

- Use statistical probability sampling methods (Stein, 1999; Ryan, Brotman & Rowe, 2000; Sell & Petruccio, 1996) or multiple sampling methods (Skinner & Otis, 1996).
- Obtain samples from multiple recruitment sites if convenience samples are used (Ryan, Brotman & Rowe, 2000; Sell & Petruccio, 1996).
- Draw subjects from various cultures and sub-cultural groups where sexual desires may be organized differently (Stein, 1999; Coyle & Rafalin, 2000).
- Include separate analyses of homosexual males, homosexual females, bisexual males and bisexual females since those groups constitute distinct communities. Also, categorizing sexual-minority individuals into the clear-cut groups may be an oversimplification of the complex and dynamic nature of sexuality (Savin-Williams, 2001; Mallon, 1999; Williams Collins, 1998; Ault, 1996)
- Evaluate subjects' sexual orientations through detailed, longitudinal, sexual histories (Stein, 1999).
- Take greater care not to allow cultural assumptions about sexual desires and how they are organized to influence the classification of subjects and the interpretation of the results of studies (Stein, 1999).
- Consider indirect in addition to direct theories in deciding how to interpret the data (Stein, 1999).
- Be less reliant on self-report data (Stein, 1999).
- Use longitudinal designs that can track changes in health and social issues, behaviours, desires and identity and the reliability of responses over a period of time and/or across the life span (Stein, 1999; Remafedi, French, Story, Resnick & Blum, 1998).
- Use standardized and detailed conceptual and operational definitions of homosexuality. Operational definitions should be developed from conceptual definitions (Roberts & Sorensen, 1999; Ryan, Brotman & Rowe, 2000; Sell & Petruccio, 1996).
- Use appropriate heterosexual comparison groups matched on relevant variables such as income, education and location (Roberts & Sorensen, 1999).
- Attempt to uncover more of the hidden population of GLB in order to find more representative samples (e.g., snowball sampling technique) (Roberts & Sorensen, 1999).
- Create contexts in which GLB feel comfortable sharing their sexual histories and health related behaviours (e.g., interviewing techniques that build rapport) (Stein, 1999).
- Use techniques that involve collaboration with community organizations and establish projects that are meaningful to GLB (Skinner & Otis, 1996).
- Employ community members as stewards of personal information for

- obtaining large samples (Skinner & Otis, 1996).
- Take into account different attributes of suburban, rural and urban GLB (Bagley & Tremblay, 1997a).
 - Include questions about sexual orientation in large-scale population surveys, since large samples are needed for meaningful sub-population analyses (i.e., GLB sub-population) (Remafedi, 1999a).

ENDNOTES

ⁱ Several sections, such as the one on homophobia, are quite similar to the ones in the original report; they were included to maintain continuity in the current report. Although most sections are similar to the previous report, most sections contain significant updates and new research that has become available in the last few years.

ⁱⁱ Ross and Rosser (1996) have developed a scale to measure internalized homophobia.

ⁱⁱⁱ Remafedi, Farrow and Deisher (1991) found that about one third of the subjects in their study reported that their suicide attempts had roots in their personal issues about their homosexual identity.

^{iv} Statistics Canada (2001d) found that 23% of Canadians reported smoking daily in 1998-1999.

^v Exacerbating the situation is evidence that GLB are specifically targeted by tobacco companies (Goebel, 1994; Washington, 2002).

^{vi} Although there is some evidence that GLB have a higher incidence of other mental disorders, such as Generalized Anxiety Disorder and Conduct Disorder, most evidence has centered on major depression; therefore, only that specific mental disorder was reviewed in the present report.

^{vii} Several reviews have found that HIV prevention interventions for GLB youths are effective at reducing HIV transmission, and are cost effective compared to the potential economic and human cost to society of increased HIV/AIDS cases (Pinkerton, Holtgrave, DiFranceisco, Stevenson & Kelly, 1998; Tao & Remafedi, 1998; Grossman, Arbess, Cavacuiti & Urbshott, 2000).

^{viii} See Ryan, Brotman and Rowe (2000) for an extensive review of this area.

^{ix} Some researchers have argued that it is "gay lifestyle" choice that accounts for increased smoking and alcohol abuse rates.

^x HIV/AIDS and GLB research is extensive, including, for example, studies on well-being and quality of life of GLB with HIV/AIDS (Siegel, Raveis & Karus, 1994; Ross & Ryan, 1995; Burgess et al., 1993; Burgess et al., 2000; Carretero et al., 1996; Schonnesson, 2002; Bing et al., 2000; Raphael et al., 2001; Cederfjall et al., 2001; Copfer et al., 1996; Holmes & Shea, 1998; Igreja et al., 2000; Rabkin et al., 1993a and 1993b), physical health implications of HIV/AIDS infection of GLB (Keithley et al., 1992; Billings et al., 2000; Antoni et al., 2002; Pakenham & Rinaldis, 2001; Wagner et al., 2000), risky sexual behaviour among men who have sex with men (Williams, Elwood & Bowen, 2000), disclosure of sexuality and relation to HIV/AIDS prevention (Kennamer et al., 2000), disclosure of HIV status (Yoshioka & Schustack, 2001), religious beliefs among GLB with variable proximity to AIDS (Bivens et al., 1994-95), psychosocial implications of HIV/AIDS (Rabkin et al., 2000; Kurdek & Siesky, 1990; Evans et al., 1998; Fell et al., 1993; Carstensen & Fredrickson, 1998; Bloom, 1997; Salisbury, 1986; Kalichman et al., 1997), social support of HIV/AIDS infected GLB (Nott, Vedhara & Power, 1995; Travers & Paoletti, 1999; Waller, 2001; Shernoff, 1990; Lichtenstein et al., 2002; Bennett, Kelaher & Ross, 1994; Barnes et al., 1993; Kadushin, 1996), the rift between HIV positive and HIV negative gay men (Botnick, 2000), substance abuse and HIV/AIDS (Shernoff & Springer, 1992), sexual dysfunction (Tindall, Forde, Goldstein, Ross & Cooper, 1994), suicidality of AIDS survivors (Rabkin, Remien, Katoff & Williams, 1993b), HIV/AIDS education and counseling (Visser & Antoni, 1994), bereavement in gay men whose partners died of AIDS (Folkman, 1997); and HIV/AIDS and sexual abuse of GLB (Batholow et al., 1994).

^{xi} For example, see Serdahely and Ziemba (1985) or Herek (1991).

REFERENCES

- Addiction Research Foundation (2001). How many people are alcoholics? On-line resource (www.arf.org/isd/stats/alcohol.html).
- Adlaf, E.M., Ivis, F.J., & Smart, R.G. (1994). Alcohol and other drug use among Ontario adults in 1994 and changes since 1977. Toronto: Addiction Research Foundation.
- Alderson, K. (2001). The concept of positive gay identity. On-line resource (www.times10.org/alderson.htm).
- Anderson, A.L. (1998). Strengths of gay male youth: An untold story. Child and Adolescent Social Work Journal, *15*, 55-71.
- Antoni, M.H., Cruess, D.G., Klimas, N., Maher, K., Cruess, S., Kumar, M., Lutgendorf, S., Ironson, G., Schneiderman, N., & Fletcher, M.A. (2002). Stress management and immune system reconstitution in symptomatic HIV-infected gay men over time: Effects on transitional naïve T cells. American Journal of Psychiatry, *159*, 143-145.
- Ault, A. (1996). Ambiguous identity in an unambiguous sex/gender structure: The case of bisexual women. The Sociological Quarterly, *37*, 449-463.
- Bagley, C., & D'Augelli, A.R. (2000). Suicidal behavior in gay, lesbian, and bisexual youth. British Medical Journal, *320*, 1617-1618.
- Bagley, C., & Tremblay, P. (1997a). Suicidal behaviors in homosexual and bisexual males. Crisis, *18*, 24-34.
- Bagley, C., & Tremblay, P. (1997b). Suicidality problems of gay and bisexual males: Evidence from a random community survey of 750 men aged 18 to 27. In C. Bagley & R. Ramsay (Eds.), Suicidal behaviours in adolescent and adults: Taxonomy, understanding and prevention (Chapter 12). Brookfield, VT: Avebury.
- Bailey, J., & Pillard, R. (1991). A genetic study of male sexual orientation. Archives of General Psychiatry, *48*, 1089-1096.
- Baker, J.A. (1993). Is homophobia hazardous to lesbian and gay health? American Journal of Health Promotion, *7*, 255-256, 262.
- Balsam, K.F. (2001). Nowhere to hide: Lesbian battering, homophobia, and minority stress. Women & Therapy, *23*, 25-37.
- Banks, C. (2001). The cost of homophobia: Literature review of the economic impact of homophobia on Canada. Saskatoon, SK: Rochon Associated Human Resource Management Consulting Inc.
- Barnes, R., Barrett, C., Weintraub, S., & Holowacz, G. (1993). Hospital response to psychosocial needs of AIDS inpatients. Journal of Palliative Care, *9*, 22-28.
- Barnes, A., & Ephross, P.H. (1994). The impact of hate violence on victims: Emotional and behavioral responses to attacks. Social Work, *39*, 247-251.
- Barr, R.F., Greenberg, H.P., & Dalton, M.S. (1974). Homosexuality and psychological adjustment. Medical Journal of Australia, *1*, 187-189.
- Bartholow, B.N., Doll, L.S., Joy, D., Douglas, J.M., Bolan, G., Harrison, J.S., Moss, P.M., & McKirnan, D. (1994). Emotional, behavioral, and HIV risks associated with sexual abuse among adult homosexual and bisexual men. Child Abuse & Neglect, *18*, 747-761.
- Bell, A.P., & Weinberg, M.S. (1978). Homosexualities: A study of diversity among men and women. New York: Simon & Schuster.
- Bennett, L., Kelaher, M., & Ross, M.W. (1994). The impact of working with HIV/AIDS on health care professionals: Development of the AIDS impact scale. Psychology and Health, *9*, 221-232.
- Berkman, C., & Zinberg, G. (1997). Homophobia and heterosexism in social workers. Social Work, *42*, 319-332.
- Bennett, K.C. & Thompson, N.L. (1980). Social and psychological functioning of the ageing male homosexual. British Journal of Psychiatry, *137*, 361-370.
- Bernhard, L.A., & Applegate, J.M. (1999). Comparison of stress and stress management strategies between lesbian and heterosexual women. Health Care for Women International, *20*, 335-347.

- Berrill, K.T. (1990). Anti-gay violence and victimization in the United States: An overview. Journal of Interpersonal Violence, *5*, 274-294.
- Bersoff, D., & Ogden, D. (1991). APA amicus curiae briefs: Furthering lesbian and gay male civil rights. American Psychologist, *46*, 950-956.
- Billings, D.W., Folkman, S., Acree, M., & Moskowitz, J.T. (2000). Coping and physical health during caregiving: The roles of positive and negative affect. Journal of Personality and Social Psychology, *79*, 131-142.
- Billy, J.O., Tanfer, K., Grady, W., & Klepinger, D.H. (1993). Sexual behavior of men in the United States. Family Planning Perspectives, *25*, 52-60.
- Bing, E.G., Hays, R.D., Jacobson, L.P., Chen, B., Gange, S.J., Kass, N.E., & Chmiel, J.S. (2000). Health-related quality of life among people with HIV disease: Results from the Multicenter AIDS Cohort Study. Quality of Life Research, *9*, 55-63.
- Binson, D., Michaels, S., Stall, R., Coates, T.J., Gagnon, J.H., & Catania, J.A. (1995). Prevalence and social distribution of men who have sex with men: United States and its urban centers. Journal of Sex Research, *32*, 245-254.
- Bivens, A.J., Neimeyer, R.A., Kirchberg, T.A., & Moore, M.K. (1994-95). Death concern and religious beliefs among gays and bisexuals of variable proximity to aids. Omega, *30*, 105-120.
- Bloom, F.R. (1997). Searching for meaning in everyday life: Gay men negotiating selves in the HIV spectrum. Ethos, *25*, 454-479.
- Bloomfield, K. (1993). A comparison of alcohol consumption between lesbians and heterosexual women in an urban population. Drug and Alcohol Dependence, *33*, 257-269.
- Botnick, M.R. (2000). Part 1: HIV as 'the line in the sand.' Journal of Homosexuality, *38*, 39-76.
- Bradford, J., Ryan, C., & Rothblum, E.D. (1994). National lesbian health care survey: Implication for mental health care. Journal of Consulting and Clinical Psychology, *62*, 228-242.
- Brewers Association of Canada (2002). Annual statistical bulletin 2001. Ottawa: Brewers Associations of Canada.
- Brogan, D.J., Frank, E., Elon, L., & Sivanesan, S.P. (1999). Harassment of lesbians as medical students and physicians. Journal of the American Medical Association, *282*, 1290-1292.
- Brooks, V. (1981). Minority stress and lesbian women. Lexington, MA: D.C. Health & Co.
- Burgess, A.P., Carretero, M., Elkington, A., Pasqual-Marsettin, E., Lobaccaro, C., & Catalan, J. (2000). The role of personality, coping style and social support in health related quality of life in HIV infection. Quality of Life Research, *9*, 423-437.
- Burgess, A., Dayer, M., Catalan, J., Hawkins, D., & Gazzard, B. (1993). The reliability and validity of two HIV-specific health-related Quality-of-Life measures: A preliminary analysis. AIDS, *7*, 1001-1008.
- Burkholder, G.J., Harlow, L.L., & Washkwich, J.L. (1999). Social stigma, HIV/AIDS knowledge, and sexual risk. Journal of Applied Biobehavioral Research, *4*, 27-44.
- Bux, D.A. (1996). The epidemiology of problem drinking in gay men and lesbians: A critical review. Clinical Psychological Review, *16*, 277-298.
- Byrne, J. (1997). What the 1996 census tells us about lesbians. On-line resource (www.womenz.org.nz/tmln/census.htm).
- Cameron, P. (2002). Homosexual partnerships and homosexual longevity: A replication. Psychological Reports, *91*, 671-678.
- Cameron, P., Cameron, K., & Playfair, W.L. (1998). Does homosexual activity shorten life? Psychological Reports, *83*, 847-866.
- Cameron, P., Playfair, W.L., & Wellum, S. (1994). The longevity of homosexuals: Before and after the aids epidemic. Omega, *29*, 249-272.
- Canadian Health Network. (1999). How much of a problem is drug use in Canada? On-line resource (www.canadian-health-network.ca).
- Carretero, M.D., Burgess, A.P., Soler, P., Soler, M., & Catalan, J. (1996). Reliability and validity of an HIV-specific health-related quality-of-life measure for use with injecting drug users. Aids, *10*, 1699-1705.

- Carstensen, L.L., & Fredrickson, B.L. (1998). Influence of HIV status and age on cognitive representations of others. Health Psychology, 17, 494-503.
- Carter, D., Lantos, J., & Hughes, J. (1996). Reassessing medical students' willingness to treat HIV-infected patients. Academic Medicine, 71, 1250-1252.
- Cederfjall, C., Languis-Eklöf, A., Lidman, K., Wredling, R. (2001). Gender differences in perceived health-related quality of life among patients with HIV infection. Aids Patient Care and STDs, 15, 31-39.
- City of Toronto Drug Prevention Centre. (2000). Drug use in Toronto - 2000. On-line resource (www.city.Toronto.on.ca/drugcentre/rgdu00/rgdu1.htm).
- Cochran, B.N., Stewart, A.J., Ginzler, J.A., Cauce, A.M. (2002). Challenges faced by homeless sexual minorities: Comparison of gay, lesbian, bisexual, and transgender homeless adolescents with their heterosexual counterparts. American Journal of Public Health, 92, 773-777.
- Cochran, S.D., & Mays, V.M. (1994). Depressive distress among homosexually active African American men and women. American Journal of Psychiatry, 151, 524-529.
- Cochran, S.D., & Mays, V.M. (2000a). Lifetime prevalence of suicide symptoms and affective disorders among men reporting same-sex sexual partners: Results from NHANES III. American Journal of Public Health, 90, 573-578.
- Cochran, S.D., & Mays, V.M. (2000b). Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population. American Journal of Epidemiology, 151, 516-523.
- Cochand, P., & Bovet, P. (1998). HIV infection and suicide risk: An epidemiological inquiry among male homosexuals in Switzerland. Social Psychiatry and Psychiatric Epidemiology, 33, 230-4.
- Cole, S.W., Kemeny, M.E., Taylor, S.E., & Visscher, B.R. (1996). Elevated physical health risk among gay men who conceal their homosexual identity. Health Psychology, 15, 243-251.
- Copfer, A.E., Ampel, N.M., Hughes, T.E., Gregor, K.J., Dois, C.L., Coons, S.J., Colgan, K., & Wu, A.W. (1996). The use of two measures of health-related quality of life in HIV-infected individuals: a cross-sectional comparison. Quality of Life Research, 5, 281-286.
- Council on Scientific Affairs. (1996). Health care needs of gay men and lesbians in the United States. Journal of the American Medical Association, 275, 1354-1359.
- Coyle, A. (1993). A study of psychological well-being among gay men using the GHQ-30. British Journal of Clinical Psychology, 32, 218-220.
- Coyle, A., & Rafalin, D. (2000). Jewish gay men's accounts of negotiating cultural, religious, and sexual identity: A qualitative study. Journal of Psychology & Human Sexuality, 12, 21-48.
- D'Augelli, A.R. (1998). Developmental implications of victimization of lesbian, gay, and bisexual youths. In G.M. Herek (Ed.) Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals (pp. 187-210). Thousand Oaks, CA: Sage Publications.
- D'Augelli, A.R., & Grossman, A.H. (2001). Disclosure of sexual orientation, victimization, and mental health among lesbian, gay, and bisexual older adults. Journal of Interpersonal Violence, 16, 1008-1027.
- D'Augelli, A.R., & Hershberger, S. (1993). Lesbian, gay and bisexual youth in community settings: Personal challenges and mental health problems. American Journal of Community Psychology, 21, 421-448.
- D'Augelli, A.R., Hershberger, S., & Pilkington, N.W. (1998). Lesbian, gay, and bisexual youth and their families: Disclosure of sexual orientation and its consequences. American Journal of Orthopsychiatry, 68, 361-372.
- Dancey, C. (1990). Sexual orientation in women: An investigation of hormonal and personality variables. Biological Psychology, 20, 251-264.
- Dardick, L., & Grady, D. (1980). Openness between gay persons and health professionals. Annals of Internal Medicine, 93, 115.
- Dempsey, C.L. (1994). Health and social issues of gay, lesbian, and bisexual adolescents. Families

in Society: The Journal of Contemporary Human Services, 75, 160-167.

Diamond, M. (1993). Homosexuality and bisexuality in different populations. Archives of Sexual Behavior, 22, 291-310.

DiPlacido, J. (1994). Stress, behavioural risk factors, and physical and psychological health outcomes in lesbians. Paper presented at APA Women's Health Conference.

Dohaney, K.E. (1995). Hopelessness, coming out, and suicide ideation and attempts among gay and lesbian youth. (Master's thesis, University of Nevada-Reno, 1996).

Edgar, T., Freimuth, V. S., & Hammond, SL (1988). Communicating the AIDS risk to college students: The problem of motivating change. Health Education Research, 3, 59-65.

Ellis, A.L., & Vasseur, R.B. (1993). Prior interpersonal contact with and attitudes towards gays and lesbians in an interviewing context. Journal of Homosexuality, 25, 31-45.

Ellison, L.F., Mao, Y., & Gibbons, L. (1995). Projected smoking-attributable mortality in Canada, 1991-2000. Chronic Diseases in Canada (Health Canada), 16, 1-6.

Ernst, F.A., Francis, R.A., Nevels, H., & Lemeh, C.A. (1991). Condemnation of homosexuality in the black community: A gender-specific phenomenon? Archives of Sexual Behaviour, 20, 579-585.

Evans, S., Ferrando, S.J., Rabkin, J.G., & Fishman, B. (2000). Health locus of control, distress, and utilization of protease inhibitors among HIV-positive men. Journal of Psychosomatic Research, 49, 157-162.

Evans, S., Ferrando, S., Sewell, M., Goggin, K., Fishman, B., & Rabkin, J. (1998). Pain and depression in HIV illness. Psychosomatics, 39, 528-535.

Fastfax. (2000). Gay men of color surpass whites in US AIDS cases. On-line-resource (www.peoplewithaids.org/fastfax/ff264.htm).

Faulkner, A., & Cranston, K. (1998). Correlates of same-sex sexual behavior in a random sample of Massachusetts high school students. American Journal of Public Health, 88, 262-266.

Faulkner, E. (1997). Anti-gay/lesbian violence in Toronto: The impact on individuals and communities. Ottawa: Department of Justice, Research and Statistics Division/Policy Sector (TR1997-5e). A project of the 519 Church Street Community Centre Victim Assistance Program, Toronto.

Fay, R., Turner, C., Klassen, A., & Gagnon, J. (1989). Prevalence and patterns of same-gender sexual contact among men. Science, 243, 338-348.

Feightner, J.W. (1994). Early detection of depression. In Canadian guide to clinical preventative health care (pp. 450-454). Ottawa: Health Canada.

Fell, M., Newman, S., Hems, M., Durrance, P., Manji, H., Connolly, S., McAllister, R., Weller, I., & Harrison, M. (1993). Mood and psychiatric disturbance in HIV and AIDS: Changes over time. British Journal of Psychiatry, 162, 604-610.

Fergusson, D., Horwood, L., & Beatrais, A. (1999). Is sexual orientation related to mental health problems and suicidality in young people? Archives of General Psychology, 56, 876-880.

Flowers, P., & Buston, K. (2001). "I was terrified of being different": Exploring gay men's accounts of growing up in a heterosexist society. Journal of Adolescence, 24, 51-65.

Folkman, S. (1997). Introduction to the special section: Use of bereavement narratives to predict well-being in gay men whose partners died of AIDS—Four theoretical perspectives. Journal of Personality and Social Psychology, 72, 851-854.

Forstein, M. (1988). Homophobia: An overview. Psychiatric Annals, 18, 33-36.

Frale, D.E.S., Wortman, C., & Joseph, J. (1997). Predicting self-esteem, well-being, and distress in a cohort of gay men: The importance of cultural stigma, personal visibility, community networks, and positive identity. Journal of Personality, 65, 599-624.

Freedman, M. (1971). Homosexuality among women and psychological adjustment. Dis Abs Int, 28, 347.

Garfinkle, E.M. & Morin, S.F. (1978). Psychologists' attitudes toward homosexual psychotherapy clients. Journal of Social Issues, 34, 101-112.

- Garland, A., & Ziegler, E. (1993). Adolescent suicide prevention. American Psychologist, *48*, 169-182.
- Garnets, L., & Kimmel, D. (1991). Lesbian and gay male dimensions in the psychological study of human diversity. In J. Goodchilds (Ed.), Psychological perspectives on human diversity in America (pp. 143-192). Washington, DC: American Psychological Association.
- Garnets, L., Herek, G.M., & Levy, B. (1990). Violence and victimization of lesbians and gay men: Mental health consequences. Journal of Interpersonal Violence, *5*, 366-383.
- Garofalo, R., Wolf, R.C., Kessel, S., Palfrey, J., & DuRant, R.H. (1998). The association between health risk behaviors and sexual orientation among a school-based sample of adolescents. Pediatrics, *101*, 895-902.
- Garofalo, R., Wolf, R.C., Wissow, L.S., Woods, E.R., & Goodman, E. (1999). Sexual orientation and risk of suicide attempts among a representative sample of youth. Archives of Pediatric and Adolescent Medicine, *153*, 487-493.
- Gartrell, N. (1981). The lesbian as a "single" woman. American Journal of Psychotherapy, *35*, 502-516.
- Gebhard, P. (1972). Incidence of overt homosexuality in the United States and Western Europe. In J.M. Livingwood (Ed.) National Institute of Mental Health task force on homosexuality: Final report and background papers. Washington, D.C.: U.S. Government Printing Office.
- Gentry, S.E. (1992). Caring for lesbians in a homophobic society. Health Care for Women International, *13*, 173-180.
- Gershon, T.D., Tschann, J.M., & Jemerin, J.M. (1999). Stigmatization, self-esteem, and coping among the adolescent children of lesbian mothers. Journal of Adolescent Health, *24*, 437-445.
- Gibson, P. (1994). Gay male and lesbian youth suicide. In G. Remafedi (Ed.) Death by denial: Studies of suicide in gay and lesbian teens (pp. 15-88). Boston: Alyson Publications.
- Gillow, K.E., & Davis, L.L. (1987). Lesbian stress and coping methods. Journal of Psychosocial Nursing, *25*, 28-32.
- Glasgow Women's Library (1999). Poverty and social exclusion of lesbians and gay men in Glasgow. Glasgow: Glasgow City Council.
- Glenn, A.A., & Russell, R.K. (1986). Heterosexual bias among counselor trainees. Counselor Education and Supervision, *25*, 222-229.
- Goldfried, M.R. (2001). Integrating gay, lesbian, and bisexual issues into mainstream psychology. American Psychologist, *56*, 975-988.
- Godin, G., Naccache, H., & Pelletier, R. (2000). Seeking medical advice if HIV symptoms are suspected: Qualitative study of beliefs among HIV-negative gay men. Canadian Family Physician, *46*, 861-868.
- Goebel, K. (1994). Lesbians and gays face tobacco targeting. Tobacco Control, *3*, 65-67.
- Goeree, R., O'Brien, B.J., Blackstone, G., Agro, K., & Goering, P. (1999). The valuation of productivity costs due to premature mortality: A comparison of the human-capital and friction-cost methods for schizophrenia. Canadian Journal of Schizophrenia, *44*, 455-463.
- Gonsiorek, J.C., & Rudolph, J.R. (1991). Homosexual identity: Coming out and other developmental events. In J.C. Gonsiorek & J.D. Weinrich (Eds.), Homosexuality: Research implications for public policy (pp. 161-176). Newbury Park, CA: Sage.
- Gonsiorek, J.C., Sell, R.L., & Weinrich, J.D. (1995). Definition and measurement of sexual orientation. Suicide and Life-Threatening Behavior, *25*, 40-51.
- Gorsky, R.D., Schwartz, E., & Dennis, D. (1988). The mortality, morbidity, and economic costs of alcohol abuse in New Hampshire. Preventative Medicine, *17*, 736-745.
- Government of Canada (1998). In search of sexual identity: Taking your first steps. Ottawa: Health Canada.
- Graham, R.P., Kirscht, J.P., Kessler, R.C., & Graham, S. (1998). Longitudinal study of relapse from AIDS-preventative behavior among

homosexual men. Health Education & Behavior, 25, 625-639.

Grant, B.F., Harford, T.C., Dawson, D.A., Chou, P., Dufour, M., & Pickering, R. (1994). National Institute on Alcohol Abuse and Alcoholism's epidemiologic bulletin no. 35: Prevalence of DSM-IV alcohol abuse and dependence, United States, 1992. Alcohol Health & Research World 18, 243-248.

Greene, B. (1994). Ethnic-minority lesbians and gay men: Mental and health and treatment issues. Journal of Consulting and Clinical Psychology, 62, 243-251.

Grossman, A.H., & Kerner, M.S. (1998). Self-esteem and supportiveness as predictors of emotional distress in gay male and lesbian youth. Journal of Homosexuality, 35, 25-39.

Grossman, D.W., Arbess, G., Cavacuiti, C., & Urbshott, G.B. (2000). Interventions for preventing HIV infection in street youth (Protocol for a Cochrane Review). In The Cochrane Library, Issue 4, 2000. Oxford: Update Software.

Hall, J.M. (1990). Alcoholism in lesbians: Developmental, symbolic interactionist, and critical perspectives. Health Care Women International, 11, 89-107.

Halpert, S.C. (2002). Suicidal behavior among gay male youth. Journal of Gay & Lesbian Psychotherapy, 6, 53-79.

Hamer, D., Hu, S., Magnuson, V., Hu, N., & Pattatucci, A. (1993). A linkage between DNA markers on the X chromosome and male sexual orientation. Science, 261, 321-327.

Hammelmann, T. (1993). Gay and lesbian youth: contributing factors to serious attempts or consideration of suicide. Journal of Gay and Lesbian Psychotherapy, 2, 77-89.

Harry, J. (1983). Parasuicide, gender, and gender deviance. Journal of Health and Social Behavior, 24, 350-361.

Harry, J. (1990). A probability sample of gay males. Journal of Homosexuality, 19, 89-104.

Hart, M., Roback, H., Tittler, B., Weitz, L., Walston, B., & McKee, E. (1978). Psychological adjustment of non-patient homosexuals: Critical

review of the research literature. Journal of Clinical Psychiatry, 39, 604-608.

Health Canada. (1996). The experiences of young gay men in the age of HIV: A review of the literature. Ottawa: Minister of Supply and Services Canada.

Health Canada. (1999a). HIV and AIDS in Canada surveillance report to December 31, 1999. Division of HIV/AIDS Surveillance, Bureau of HIV/AIDS, STD and TB, Laboratory Centre for Disease Control, Health Protection Branch.

Health Canada. (1999b). Sexual risk behaviours of Canadians. HIV/AIDS Epi Update, May, 1-5.

Health Canada. (1999, January). Deaths in Canada due to smoking. On-line resource (<http://www.hc-sc.gc.ca/english/media/releases/1999/9907ebk6.htm>).

Health Canada. (2000a). Canadian tobacco use monitoring survey. Ottawa: Health Canada.

Health Canada (2000b). HIV and AIDS in Canada. Surveillance report to December 31, 1999. Ottawa: Division of HIV/AIDS Surveillance, Bureau of HIV/AIDS, STD and TB, LCDC, Health Canada.

Hecht, J.B. (1998). Suicidality and psychological adjustment in a community sample of lesbian, gay, and bisexual youth. (Doctoral dissertation, Boston University, Boston, 1998).

Heckman, T.G., Smlai, A.M., Otto-Salaj, & Davantes, B.R. (1998). Health-related quality of life among people living with HIV disease in small communities and rural areas. Psychology and Health, 13, 859-871.

Hellquist, G. (1996). A strategy towards population health and wellness. Saskatoon, SK: Gay and Lesbian Health Services.

Herdt, G., & Boxer, A. (1993). Children of horizons: How gay and lesbian teens are leading a new way out of the closet. Boston: Beacon Press.

Herek, G.M. (1986). On heterosexual masculinity: Some psychical consequences of the social construction of gender and sexuality. American Behavioral Scientist, 29, 563-577.

Herek, G.M. (1990). Gay people and government security clearances: A social science perspective. American Psychologist, *45*, 1035-1042.

Herek, G.M. (1991). Stigma, prejudice, and violence against lesbians and gay men. In J.C. Gonsiorek & J.D. Weinrich (Eds.), Homosexuality: Research implications for public policy (pp. 60-80). Newbury Park, CA: Sage.

Herek, G.M. (1993). Documenting prejudice against lesbians and gay men on campus: The Yale Sexual Orientation Survey. Journal of Homosexuality, *25*, 15-30.

Herek, G.M. (2000). The psychology of sexual prejudice. Current Directions in Psychological Science, *9*, 19-22.

Herek, G.M., Gillis, J.R., & Cogan, J.C. (1999). Psychological sequelae of hate-crime victimization among lesbian, gay, and bisexual adults. Journal of Consulting and Clinical Psychology, *67*, 945-951.

Herrell, R., Goldberg, W., True, V., Ramakrishnan, M., Lyons, Eisen, S., & Tsuang, M. (1999). Sexual Orientation and Suicidality: A co-twin control study in adult men. Archives of General Psychiatry, *56*, 867-888.

Hershberger, S., & D'Augelli, A. (1995). The impact of victimization on the mental health and suicidality of lesbian, gay and bisexual youths. Developmental Psychology, *31*, 65-74.

Hewitt, C. (1998). Homosexual demography: Implications for the spread of AIDS. The Journal of Sex Research, *35*, 390-396.

Hogg, R.S., Strathdee, S.A., Craib, K.J., O'Shaughnessy, M.V., Montaner, J.S., & Schechter, M.T. (1997). Modelling the impact of HIV disease on mortality in gay and bisexual men. International of Journal of Epidemiology, *26*, 657-661.

Holmes, W.C., & Shea, J.A. (1998). A new HIV/AIDS-targeted quality of life (HAT-QoL) instrument: Development, reliability, and validity. Medical Care, *36*, 138-154.

Hooker, E. (1969). Parental relations and male homosexuality in patient and nonpatient samples. Journal of Consulting and Clinical Psychology, *33*, 140-142.

Hunt, M. (1974). Sexual behavior in the 1970's. New York: Dell

Hunter, J. (1990). Violence against lesbian and gay male youths. Journal of Interpersonal Violence, *5*, 295-300.

Igreja, I., Zuroff, D.C., Koestner, R., Saltaris, C., Brouillette, M.J., & LaLonde, R. (2000). Applying self-determination theory to the prediction of distress and well-being in gay men with HIV and AIDS. Journal of Applied Social Psychology, *30*, 686-706.

Iversen, L., Andersen, O., Andersen, P.K., Christoffersen, K., & Keiding, N. (1987). Unemployment and mortality in Denmark. British Medical Journal, *295*, 879-884.

Janus, S., & Janus, C. (1993). The Janus Report on sexual behavior. New York: John Wiley and Sons.

Jay, K., & Young, A. (1979). The gay report: Lesbians and gay men speak out about their sexual experiences and lifestyles. New York: Simon and Schuster.

Johnston, D., Stall, R., & Smith, K. (1995). Reliance by gay men and intravenous drug users on friends and family for AIDS-related care. AIDS Care, *7*, 307-319.

Johnson, S.R., & Palermo, J.L. (1985). Gynecologic care for the lesbian. In W.R. Dynes & S. Donaldson (Eds.), Homosexuality and medicine, health and science (pp. 86-93). New York: Garland Publishing.

Johnson, W., & Peersman, G. (2000). Interventions to modify sexual risk behaviors for preventing HIV infection in men who have sex with men (Protocol for a Cochrane Review). In The Cochrane Library, Issue 4, 2000. Oxford: Update Software.

Jones, M.A., & Gabriel, M.A. (1999). Utilization of psychotherapy by lesbians, gay men, and bisexuals: Findings from a nationwide survey. American Journal of Orthopsychiatry, *69*, 209-219.

Jordan, K.M., Vaughan, J.S., & Woodworth, K.J. (1997). I will survive: Lesbian, gay, and bisexual experience of high school. Journal of Gay and Lesbian Social Services, *7*, 17-33.

- Kadushin, G. (1996). Gay men with AIDS and their families of origin: An analysis of social support. Health & Social Work, 21, 141-149.
- Kalichman, S.C., Kelly, J.A., Morgan, M., & Rompa, D. (1997). Fatalism, current life satisfaction, and risk for HIV infection among gay and bisexual men. Journal of Consulting and Clinical Psychology, 65, 542-546.
- Kehoe, M. (1990). Loneliness and the aging homosexual: Is pet therapy an answer? Journal of Homosexuality, 20, 137-142.
- Keithley, J.K., Zeller, J.M., Szeluga, D.J., & Urbanski, P.A. (1992). Nutritional alterations in persons with HIV infection. Image: Journal of Nursing Scholarship, 24, 183-189.
- Kelly, J.A. (2002). Innovations in the application of social cognitive principles to develop prevention interventions to reduce unsafe sexual behaviors among gay and bisexual men. In M.A. Chesney & M.H. Antoni (Eds.), Innovative approaches to health psychology: Prevention and treatment lessons from AIDS (pp. 71-96). Washington, DC: American Psychological Association.
- Kelly, B., Raphael, B., Judd, F., Perdices, M., Kernutt, G., Burnett, P., Dunne, M., & Burrows, G. (1998). Suicidal ideation, suicide attempts, and HIV infection. Psychosomatics, 39, 405-415.
- Kenamer, J.D., Honnold, J., Bradford, J., & Hendricks, M. (2000). Differences in disclosure of sexuality among African American and white gay/bisexual men: Implications for HIV/AIDS prevention. AIDS Education and Prevention, 12, 519-531.
- King, A., Beazley, R., Warren, W., Hankins, C., Robertson, A., & Radford, J. (1988). Canada youth and AIDS study. Kingston: Queen's University.
- Kinsey, A., Pomeroy, W., & Martin, C. (1948). Sexual behavior in the human male. Philadelphia: W.B. Saunders.
- Kinsey, A., Pomeroy, W., & Martin, C. (1953). Sexual behavior in the human female. Philadelphia: W.B. Saunders.
- Kourany, R.F. (1987). Suicide among homosexual adolescents. Journal of Homosexuality, 13, 111-117.
- Kroll, I.T., & Warneke, L.B. (1995). The dynamics of sexual orientation and adolescent suicide: A comprehensive review and development perspective. Calgary: The University of Calgary and the University of Alberta.
- Kurdek, L.A., & Schmitt, J.P. (1986). Interaction of sex role self-concept with relationship quality and relationship beliefs in married, heterosexual cohabiting, gay, and lesbian couples. Journal of Personality and Social Psychology, 51, 365-370.
- Kurdek, L.A., & Siesky, G. (1990). The nature and correlates of psychology adjustment in gay men with AIDS-related conditions. Journal of Applied Social Psychology, 20, 846-860.
- Larsen, K.S., Reed, M., & Hoffman, S. (1980). Attitudes of heterosexuals toward homosexuality: A Likert-type scale and construct validity. Journal of Sex Research, 16, 245-257.
- Larson, D., & Chastain, R. (1990). Self-concealment: Conceptualization, measurement, and health implications. Journal of Social Clinical Psychology, 9, 439-455.
- Laumann, E.O., Gagnon, J.H., Michael, R.T., & Michaels, S. (1994). The social organization of sexuality: Sexual practices in the United States. Chicago: University of Chicago Press.
- Lawrence, J.S., Kelly, J.A., Owen, A.D., Hogan, I.G., & Wilson, R.A. (1990). Psychologists' attitudes towards AIDS. Psychology and Health, 4, 357-365.
- Lee, R. (2000). Health care problems of lesbian, gay, bisexual, and transgender patients. Western Journal of Medicine, 172, 403-408.
- Leserman, J., Petitto, J.M., Golden, R.N., Gaynes, B.N., Hongbin, G., Perkins, D.O., Silva, S.G., Folds, J.D., & Evans, D.L. (2000). Impact of stressful life events, depression, social support, coping, and cortisol on progression to AIDS. American Journal of Psychiatry, 157, 1221-1228.
- Lewinsohn, P., Rohde, P., & Seeley, J. (1993). Psychosocial characteristics of adolescents with a history of a suicide attempt. Journal of the American Academy of Child and Adolescent Psychiatry, 32, 60-68.
- Lichtenstein, B., Laska, M.K., & Clair, J.M. (2002). Chronic sorrow in the HIV-positive patient:

Issues of race, gender, and social support. AIDS Patient Care and STDs, 16, 27-38.

Magnuson, C. (1992). Lesbian and gay youth in Ottawa: The importance of community. Ottawa: Pink Triangle Youth.

Mallon, G.P. (1999). Practice with transgendered children. Journal of Gay & Lesbian Social Services, 10, 49-64.

Malyon, A.K. (1982). Psychotherapeutic implications of internalized homophobia in gay men. Journal of Homosexuality, 7, 59-70.

Martikainen, P. (1990). Unemployment and mortality among Finnish men. British Medical Journal, 301, 407-411.

Martin, A.D., & Hetrick, E.S. (1988). The stigmatization of the gay and lesbian adolescent. Journal of Homosexuality, 15, 163-183.

Matthews, A., Hughes, T.L., Johnson, T., Razzano, L.A., & Cassidy, R. (2002). Prediction of depressive distress in a community sample of women: The role of sexual orientation. American Journal of Public Health, 92, 1131-1139.

Mays, V.M., & Cochran, S.D. (2001). Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. American Journal of Public Health, 91, 1869-1876.

McGarry, K., Clarke, J., & Cyr, M.G. (2000). Enhancing residents' cultural competence through a lesbian and gay health curriculum. Academic Medicine, 75, 515.

McGregor, B.A., Carver, C.S., Antoni, M.H., Weiss, S., Yount, S.E., & Ironson, G. (2001). Distress and internalized homophobia among lesbian women treated for early stage cancer. Psychology of Women Quarterly, 25, 1-9.

McKirnan, D.J., & Peterson, P.L. (1989a). Alcohol and drug use among homosexual men and women: Epidemiology and population characteristics. Addictive Behaviors, 14, 545-553.

McKirnan, D.J., & Peterson, P.L. (1989b). Psychosocial and cultural factors in alcohol and drug abuse: An analysis of a homosexual community. Addictive Behaviors, 14, 555-563.

Meyer, I.H. (1995). Minority stress and mental health in gay men. Journal of Health and Social Behavior, 36, 38-56.

Meyer, I.H., & Dean, L. (1996). Internalized homophobia, intimacy, and sexual behavior among gay and bisexual men. Stigma and Sexual Orientation, 160-186.

Mihalik, G.J. (1991). Homosexuality, stigma, and biocultural evolution. Journal of Gay & Lesbian Psychotherapy, 1, 15-29.

Minnesota Gay Homicide Study (2000). Progress report 2002. Minneapolis: Minnesota Gay Homicide Study.

Mitchell, V. (2000). The bloom is on the rose: The impact of midlife on the lesbian couple. Journal of Gay & Lesbian Social Services, 11, 33-48.

Mood Disorders Association of Manitoba (2001). Troubling facts on mental illnesses and depressive mood disorders in Canada. On-line resource (www.depression.mb.ca/facts.html).

Morgan, K.S. (1992). Caucasian lesbians' use of psychotherapy: A matter of attitude. Psychology of Women Quarterly, 16, 127-130.

Morris, J.K., Cook, D.G., & Shaper, A.G. (1994). Loss of employment and mortality. British Medical Journal, 308, 1135-1139.

Morris, J.F., Waldo, C.R., & Rothblum, E.D. (2001). A model of predictors and outcomes of outness among lesbian and bisexual women. American Journal of Orthopsychiatry, 71, 61-71.

Morrison, L.L., & L'Heureux, J. (2001). Suicide and gay/lesbian/bisexual youth: Implications for clinicians. Journal of Adolescence, 24, 39-49.

Morrow, D.F. (1993). Social work with gay and lesbian adolescents. Social Work, 38, 655-660.

Morrow, D.F. (2001). Older gays and lesbians: Surviving a generation of hate and violence. Journal of Gay & Lesbian Social Services, 13, 151-169.

Moser, K.A., Fox, A.J., & Jones, D.R. (1984). Unemployment and mortality in the OPCS longitudinal study. Lancet ii, 1324-1328.

- Mouzos, J., & Thompson, S. (2000). Gay-hate related homicides: An overview of major findings in New South Wales. Trends and Issues in Crime and Criminal Justice (Australian Institute of Criminology), No. 155.
- Muehrer, P. (1995). Suicide and sexual orientation: A critical summary of recent research and directions for future research. Suicide and Life Threatening Behavior, *25*, 72-81.
- Mutchler, M.G. & Freeman, G. (1999). AIDS project Los Angeles: 1999 client survey. On-line resource (www.apla.org/apla/ed/99FREQ.pdf).
- Naiman, S. (2000). Targeting the high cost of workplace depression. Toronto Sun, October 12.
- Nesmith, A.A., Burton, D.L., & Cosgrove, T.J. (1999). Gay, lesbian, and bisexual youth and young adults: Social support in their own words. Journal of Homosexuality, *37*, 95.
- New Brunswick Coalition for Human Right Reform (1990). Discrimination and violence encountered by lesbian, gay and bisexual New Brunswickers. Fredericton, NB: New Brunswick Coalition for Human Right Reform.
- Newman, S.C. (2003). The epidemiology of mental disorders. On-line resource ([www.phs.ualberta.ca/staff/StephenNewmanPresentations/PHS505\(02\).pdf](http://www.phs.ualberta.ca/staff/StephenNewmanPresentations/PHS505(02).pdf)).
- Nicholas, J., & Howard, J. (1998). Better dead than gay: Depression, suicide ideation, and attempt among a sample of gay and straight-identified males aged 18 to 24. Youth Studies Australia, *17*, 28-33.
- Nott, K.H., & Vedhara, K. (1999). Nature and consequences of stressful life events in homosexual HIV-positive men: A review. AIDS Care, *11*, 235-243.
- Nott, K.H., Vedhara, K., & Power, M.J. (1995). The role of social support in HIV infection. Psychological Medicine, *25*, 971-983.
- Nystrom, N. (1997, February). Mental health experiences of gay men and lesbians. Paper presented at symposium on assessing health needs of gay men and lesbians, American Association for Advancement of Science, Houston.
- O'Brien, T. (1991). A survey of gay/lesbian Catholics concerning attitudes toward sexual orientation and religious beliefs. Journal of Homosexuality, *21*, 29-44.
- O'Hanlan, K. (1995). Lesbian health and homophobia: Perspectives for the treating obstetrician/gynecologist. Current Problems in Obstetrics and Gynecology, *18*, 97-133.
- O'Hanlan, K., Lock, J., Robertson, P., Cabaj, R.P., Schatz, B., & Nemrow, P. (1996). Homophobia as a health hazard: Report of the gay and lesbian medical association. On-line report (www.ohanlan.com/phobiahd.htm), 1-31.
- O'Hare, T., Williams, C.L., & Ezoviski, A. (1996). Fear of AIDS and homophobia: Implications for direct practice and advocacy. Social Work, *41*, 51-58.
- Ostrow, D.G. (2000). The role of drugs in the sexual lives of men who have sex with men: Continuing barriers to researching this question. AIDS and Sexual Behavior, *4*, 205-219.
- Otis, M.D., & Skinner, W.F. (1996). The prevalence of victimization and its effects on mental well-being among lesbian and gay people. Journal of Homosexuality, *30*, 93-117.
- Padesky, C.A. (1989). Attaining and maintaining positive lesbian self-identity: A cognitive therapy approach. Women and Therapy, *8*, 145-156.
- Pagelow, M.D. (1980). Heterosexual and lesbian single mothers: A comparison of problems, coping, and solutions. Journal of Homosexuality, *5*, 189-204.
- Pakenham, K.I., & Rinaldis, M. (2001). The role of illness, resources, appraisal, and coping strategies in adjustment to HIV/AIDS: The direct and buffering effects. Journal of Behavioral Medicine, *24*, 259-279.
- Patten, S.B. (2000). Incidence of major depression in Canada. Canadian Medical Association Journal, *163*, 714-715.
- Paul, J.P., Catania, J., Pollack, L., Moskowitz, J., Canchola, J., Mills, T., Binson, D., & Stall, R. (2002). Suicide attempts among gay and bisexual men: Lifetime prevalence and antecedents. Research and Practice, *92*, 1338-1345.

- Peersman, G., Sogolow, E., & Harden, A. (2000). Interventions for preventing HIV infection in young people (Protocol for a Cochrane Review). In The Cochrane Library, Issue 4, 2000. Oxford: Update Software.
- Penninx, B.W., Beekman, T.F., Honig, A., Deeg, D.J., Schovers, R.A., van Eijk, J.T., & van Tilburg, W. (2001). Depression and cardiac mortality: Results from a community-based longitudinal study. Archives of General Psychiatry, *58*, 221-227.
- Penninx, B.W., Geerlings, S.W., & Deeg, D.J. (1999). Minor and major depression and the risk of death in older persons. Archives of General Psychiatry, *56*, 889-895.
- Peters, D.K., & Cantrell, P.J. (1991). Factors distinguishing samples of lesbian and heterosexual women. Journal of Homosexuality, *21*, 1-15.
- Pietropinto, A., & Simenauer, J. (1977). Beyond the male myth. New York: Times Books.
- Pinkerton, S.D., Holtgrave, D.R., DiFranceisco, W.J., Stevenson, L.Y., & Kelly, J.A. (1998). Cost-effectiveness of a community-level HIV risk education intervention. American Journal of Public Health, *88*, 1239-1242.
- Prince, J.P. (1995). Influences on the career development of gay men. Journal of Career Development, *5*, 168-177.
- Proctor, C.D., & Groze, V.K. (1994). Risk factors for suicide among gay, lesbian, and bisexual youths. Social Work, *39*, 504-513.
- Pulska T, Pahkala K, Laippala P & Kivelä S-L. (1997). Six-year survival of depressed elderly Finns. A community study. International Journal of Geriatric Psychiatry, *12*, 942-950.
- Pulska T, Pahkala K, Laippala P & Kivelä S-L. (1998a). Major depression as a predictor of premature deaths in elderly people in Finland: A community study. Acta Psychiatrica Scandinavica, *97*, 408-411.
- Pulska T, Pahkala K, Laippala P & Kivelä S-L. (1998b). Six-year survival of depressive elderly Finns suffering from dysthymic disorder: A community study. Social Psychiatry and Psychiatric Epidemiology, *33*, 319-325.
- Pulska T, Pahkala K, Laippala P & Kivelä S-L. (1999). Follow-up study of longstanding depression as predictor of mortality in elderly people living in the community. British Medical Journal, *318*, 432-433.
- Pulska T, Pahkala K, Laippala P & Kivelä S-L. (2000). Depressive symptoms predicting mortality in depressed elderly Finns. International Journal of Geriatric Psychiatry, *15*, 940-946.
- Rabkin, J.G., Ferrando, S.J., Lin, S.H., Sewell, M., & McElhiney, M. (2000). Psychological effects of HAART: A 2-year study. Psychosomatic Medicine, *62*, 413-422.
- Rabkin, J.G., Remien, R., Katoff, L., & Williams, J.B.W. (1993a). Resilience in adversity among long-term survivors of AIDS. Hospital and Community Psychiatry, *44*, 162-167.
- Rabkin, J.G., Remien, R., Katoff, L., & Williams, J.B.W. (1993b). Suicidality in AIDS long-term survivors: what is the evidence? AIDS Care, *5*, 401-411.
- Raphael, D., Waalen, J., & Karabanow, A. (2001). Factor analytic properties of the quality of life profile: Examination of the nine subdomain quality of life model. Psychological Reports, *88*, 265-276.
- Remafedi, G. (1987). Adolescent homosexuality: Psychosocial and medical implications. Pediatrics, *79*, 331-337.
- Remafedi, G. (1993). The impact of training on school professionals' knowledge, beliefs, and behaviors regarding HIV/AIDS and adolescent homosexuality. Journal of School Health, *63*, 153-157.
- Remafedi, G. (1994). Death by denial: Studies of suicide in gay and lesbian teenagers. Boston: Alyson Publications.
- Remafedi, G. (1999a). Sexual orientation and youth suicide. Journal of the American Medical Association, *282*, 1291-1292.
- Remafedi, G. (1999b). Suicide and sexual orientation: Nearing the end of controversy? Archives of General Psychiatry, *56*, 885-886.

- Remafedi, G., Farrow, J.A., & Deisher, R.W. (1991). Risk factors for attempted suicide in gay and bisexual youth. *Pediatrics*, *87*, 869-875.
- Remafedi, G., French, S., Story, M., Resnick, M., & Blum, R. (1998). The relationship between suicide risk and sexual orientation: Results of population-based study. *American Journal of Public Health*, *88*, 57-60.
- Rice, D.P. (1993). The economic cost of alcohol abuse and alcohol dependence: 1990. *Alcohol Health and Research World*, *17*, 10-11.
- Rivers, I. (2000). School exclusion, absenteeism, and sexual minority youth. *Support for Learning: British Journal of Learning Support*, *15*, 13-18.
- Roberts, J.V. (1995). *Disproportionate harm: Hate crime in Canada - An analysis of recent statistics*. Ottawa: Department of Justice, Research, Statistics and Evaluation Directorate
- Roberts, S.J., & Sorensen, L. (1995). Lesbian health care: A review and recommendations for health promotion in primary care settings. *Nurse Practitioner*, *20*, 42-47.
- Roberts, S.J., & Sorensen, L. (1999). Health related behaviors and cancer screening of lesbians: Results from the Boston Lesbian Health Project. *Women and Health*, *28*, 1-12.
- Roesler, T., & Deisher, R. (1972). Youthful male homosexuality. *Journal of the American Medical Association*, *219*, 1018-1023.
- Rofes, E. (2000). *What is a healthy gay man?* Boulder, CO: The Gay Men's Health Summit II.
- Rogers, S., & Turner, C. (1991). Male-male sexual contact in the U.S.A.: Findings from five sample surveys, 1970-1990. *Journal of Sex Research*, *28*, 491-519.
- Romero, P. (1999). Impact of racism, homophobia and poverty on suicidal ideation among Latino gay men. *The Berkeley McNair Research Journal*, 115-128.
- Rosenberg, S.D., Trumbetta, S.L., Muesser, K.T., Goodman, L.A., Osher, F.C., Vidaver, R.M., & Metzger, D.S. (2001). Determinants of risk behavior for human immunodeficiency virus/acquired immunodeficiency syndrome in people with severe mental illness. *Comprehensive Psychiatry*, *42*, 263-271.
- Ross, M.W. (1978). The relationship of perceived societal hostility, conformity, and psychological adjustment in homosexual males. *Journal of Homosexuality*, *4*, 157-168.
- Ross, M.W. (1985). Understanding the homosexual patient. *Patient Management*, *Sept*, 15-25.
- Ross, M.W. (1989). Gay youth in four cultures: A comparative study. In G. Herdt (Ed.) *Gay and lesbian youth* (pp. 299-314). New York: Harrington Park Press.
- Ross, M.W., Paulsen, J.A., & Stalstrom, O.W. (1988). *Homosexuality and mental health*, *15*, 131-152.
- Ross, M.W., & Rosser, B.R.S. (1996). Measurement and correlates of internalized homophobia: A factor analytic study. *Journal of Clinical Psychology*, *52*, 15-21.
- Ross, M.W., & Ryan, L. (1995). The little deaths: Perceptions of HIV, sexuality and quality of life in gay men. *Journal of HIV/AIDS and Sexuality*, *7*, 1-20.
- Rotheram-Borus, M.J., Hunter, J., & Rosario, M. (1994). Suicidal behavior and gay-related stress among gay and bisexual adolescents. *Journal of Adolescent Research*, *9*, 498-508.
- Rudolph, J. (1988). Counselors' attitudes toward homosexuality: A selective review of the literature. *Journal of Counseling and Development*, *67*, 165-168.
- Rudolph, J. (1989). Effects of a workshop on mental health practitioners' attitudes toward homosexuality and counseling effectiveness. *Journal of Counseling and Development*, *68*, 81-85.
- Ryan, B., Brotman, S., & Rowe, B. (2000). *Access to care: Exploring the health and well-being of gay, lesbian, bisexual and two-spirit people in Canada*. Montreal: McGill Centre for Applied Family Studies.
- Saewyc, E., Bearinger, L., Heinz, P., Blum, R. & Resnick, M. (1998). Gender differences in health and risk behaviors among bisexual and

homosexual adolescents. Journal of Adolescent Health, 23, 181-188.

Safe Schools Coalition of Washington. (1999). Eighty-three thousand youth: Selected findings of eight population based-studies as they pertain to anti-gay harassment and the safety and well-being of sexual minority students. Seattle: Seattle-King County Department of Public Health.

Salisbury, D.M. (1986). AIDS: Psychological implications. Journal of Psychosocial Nursing, 24, 13-16.

Samis, S. (1995). An injury to one is an injury to all: Heterosexism, homophobia and anti-gay/lesbian violence in Greater Vancouver. (Master's thesis, Simon Fraser University-Burnaby, B.C., 1994).

Saunders, C.C. (2000). Gay health issues addressed at the federal level. Patient Care, April 15, 13.

Saunders, J.M., & Valente, S.M. (1987). Suicide risk among gay men and lesbians: A review. Death Studies, 11, 1-23.

Savin-Williams, R.C. (1994). Verbal and physical abuse as stressors in the lives of lesbian, gay male, and bisexual youths: Associations with school problems, running away, substance abuse, prostitution and suicide. Journal of Consulting and Clinical Psychology, 62, 261-269.

Savin-Williams, R.C. (2001). A critique of research on sexual-minority youths. Journal of Adolescence, 24, 5-13.

Schatz, B., & O'Hanlan, K. (1994). Anti-gay discrimination in medicine: Results of a national survey of lesbian, gay and bisexual physicians. San Francisco: American Association of Physicians for Human Rights.

Schneider, S.G., Farberow, N.L., & Kruks, G.N. (1989). Suicidal behavior in adolescent and young adult gay men. Suicide and Life-Threatening Behavior, 19, 381-394.

Schonnesson, L.N. (2002). Psychological and existential issues and quality of life in people living with HIV infection. AIDS Care, 14, 399-404.

Schulz, R., Beach, S.R., Ives, D.G., Martire, L.M., Ariyo, A.A., & Kop, W.J. (2000). Association between depression and mortality in older adults: The cardiovascular health study. Archives of Internal Medicine, 160, 1761-1768.

Schulz, R., Drayer, R.A., & Rollman, B.L. (2002). Depression as a risk factor for non-suicide mortality in the elderly. Biological Psychiatry, 52, 202-225.

Sell, R.L., & Petruccio, C. (1996). Sampling homosexuals, bisexuals, gays, and lesbians for public health research: A review of the literature from 1990 to 1992. Journal of Homosexuality, 30, 31-47.

Sell, R.L., Wells, J.A., & Wypij, D. (1995). The prevalence of homosexual behavior and attraction in the United States, the United Kingdom and France: Results of national population-based samples. Archives of Sexual Behavior, 24, 235-248.

Serdahely, W.J., & Ziemba, G.J. (1985). Changing homophobic attitudes through college sexuality education. In J.P. De Cocco (Ed.), Bashers, baiters and bigots: Homophobia in American society (109-116). New York: Harrington Park Press.

Sewell, M.C., Goggin, K.J., Rabkin, J.G., Ferrando, S.J., McElhiney, M.C., & Evans, S. (2000). Anxiety syndromes and symptoms among men with AIDS: A longitudinal controlled study. Psychosomatics, 41, 294-300.

Shafii, M., Carrigan, B., Whittinghill, J., & Derrick, A. (1985). Psychosocial autopsy of completed suicides in children and adolescents. American Journal of Psychiatry, 142, 1061-1064.

Shelby, P. (1999). Isolated and invisible gay, lesbian and bisexual youth. Canadian Nurse, 95, 27-30.

Shernoff, M. (1990). Why every social worker should be challenged by AIDS. Social Work, 35, 5-8.

Shernoff, M., & Springer, E. (1992). Substance abuse and AIDS: Report from the front lines (the impact on professionals). Journal of Chemical Dependency Treatment, 5, 35-48.

Siegel, K., Raveis, V.H., & Karus, D. (1994). Psychological well-being of gay men with AIDS: Contribution of positive and negative illness-

related network interactions to depressive mood. Social Science and Medicine, 39, 1555-1563.

Siegelman, M. (1979). Adjustment of homosexual and heterosexual women. British Journal of Psychiatry, 120, 477.

Siminoff, L.A., Erlen, J.A., & Sereika, S. (1998). Do nurses avoid AIDS patients? Avoidance behaviours and the quality of care of hospitalized AIDS patients. AIDS Care, 10, 147-163.

Simonsen, G., Blazina, C., & Watkins, C.E. (2000). Masculine gender role conflict in gay men: Measuring psychological well-being and attitudes toward help-seeking. Journal of Counseling Psychology, 47, 85-89.

Single, E., Rehm, J., Robson, L., & Truong, M.V. (2000). The relative risks and etiologic fractions of different causes of death and disease attributable to alcohol, tobacco and illicit drug use in Canada. Canadian Medical Association Journal, 162, 1669-1675.

Single, E., Robson, L., Xie, X., & Rehm, J. (1996). The costs of substance abuse in Canada: Highlights of a major study of the health, social and economic costs associated with the use of alcohol, tobacco and illicit drugs. Ottawa: Canadian Centre on Substance Abuse.

Single, E.W., Brewster, J.M., MacNeil, P., Hatcher, J., & Trainor, C. (1995). Alcohol and drug use: Results from the 1993 general social survey. Ottawa: Health Canada.

Skinner, W.F. (1994). The prevalence and demographic predictors of illicit and licit drug use among lesbians and gay men. American Journal of Public Health, 84, 1307-1310.

Skinner, W.F., & Otis, M.D. (1996). Drug and alcohol use among lesbian and gay people in a southern U.S. sample: Epidemiological, comparative, and methodological findings from the Trilogy Project. Journal of Homosexuality, 30, 59-92.

Small, E.J., & Leach, B. (1977). Counseling homosexual alcoholics: Ten case histories. Journal of Studies on Alcohol, 38, 2077-2086.

Smith, C.G. (1993a). Proud but cautious: Homophobic abuse and discrimination in Nova Scotia. Halifax: The Nova Scotia Public Research Group.

Smith, G.B. (1993b). Homophobia and attitudes toward gay men and lesbians by psychiatric nurses. Archives of Psychiatric Nursing, 7, 377-384.

Smith, T.W. (1991). Adult sexual behavior in 1989: Number of partners, frequency of intercourse and risk of AIDS. Family Planning Perspectives, 23, 103-107.

Sorensen, L., & Roberts, S.J. (1993). National lesbian health care survey: Implications for mental health. Paper presented at the American Psychology Association Convention, Toronto, August.

Stall, R.D., & Wiley, J. (1988). A comparison of drug and alcohol use habits of heterosexual and homosexual men. Drug and Alcohol Dependence, 22, 63-74.

Stall, R.D., Greenwood, G.L., Acree, M., Pau, J., & Coates, T.J. (1999). Cigarette smoking among gay and bisexual men. American Journal of Public Health, 89, 1875-1878.

Stall, R., Paul, J.P., Greenwood, G., Pollack, L.M., Bein, E., Crosby, G.M., Mills, T.C., Binson, D., Coates, T.J., & Catania, J.A. (2001). Alcohol use, drug use and alcohol-related problems among men who have sex with men: the Urban Men's Health Study. Addiction, 96, 1589-1601.

Statistics Canada (1998). National population health survey. Catalogue no. 82M0010XCBO.

Statistics Canada (2001a). Alcohol consumption, by sex, age group and level of education. Catalogue no. 82M0009XCB.

Statistics Canada (2001b). Deaths and death rate. CANSIM, Matrix 5773.

Statistics Canada (2001c). Labour force and participation rates. CANSIM, Matrix 3472.

Statistics Canada (2001d). Percentage of smokers in the population. Catalogue no. 82M0009XCB.

Statistics Canada (2001e). Selected leading causes of death by sex. Health Statistics Division.

Statistics Canada (2001f). Life expectancy at birth. Catalogue no. 82F0075XCB.

- Statistics Canada. (2001g). Labour force characteristics by age and sex. CANSIM, Matrix 3472.
- Statistics Canada. (2001h). Number of weeks depressed in past 52 weeks, by age and sex. National Population Health Survey, 1996-97.
- Statistics Canada. (2001i). Suicides, and suicide rate, by sex, by age group. Catalogue no. 82F0075XCB.
- Statistics Canada (2002). Homicide in Canada - 2001. Catalogue no. 85-002-XPE2002007.
- Stein, E. (1999). The mismeasure of desire: The science, theory, and ethics of sexual orientation. Oxford: University Press.
- Stevens, P., & Hall, J.M. (1988). Stigma, health beliefs and experiences with health care in lesbian women. Image: Journal of Nursing Scholarship, 20, 69-73.
- Stevens, P., & Hall, J. (1991). A critical historical analysis of the medical construction of lesbianism. International Journal of Health Services, 21, 293-307.
- Stevens, P.E. (1994). Lesbians' health-related experiences of care and noncare. Western Journal of Nursing Research, 16, 639-659.
- Stokes, K., Kilmann, P.R., & Wanlass, R.L. (1983). Sexual orientation and sex role conformity. Archives of Sexual Behavior, 12, 427-433.
- Strasser, J.A., & Damrosch, S. (1992). Graduate nursing students' attitudes toward gay and hemophilic men with AIDS. Evaluation & the Health Professions, 15, 115-127.
- Strommen, E.F. (1989a). Hidden branches and growing pains: Homosexuality and the family tree. Marriage and Family Review, 14, 9-34.
- Strommen, E.F. (1989b). "You're a what?": Family members' reactions to the disclosure of homosexuality. Journal of Homosexuality, 18, 37-58.
- Sussman-Skalka, C. (2001). Vision and older adults. Journal of Gay & Lesbian Social Services, 13, 95-101.
- Tao, G.Y., & Remafedi, G. (1998). Economic evaluation of an HIV prevention intervention for gay and bisexual male adolescents. Journal of Acquired Immune Deficiency Syndromes & Human Retrovirology, 17, 83-90.
- Taylor, H. (1993). Number of gay men more than four times higher than the 1 percent reported in recent survey. The Harris Poll #20. New York: Louis Harris and Associates.
- Telljohann, S.K., & Price, J.H. (1993). A qualitative examination of adolescent homosexuals' life experiences: Ramifications for secondary school personnel. Journal of Homosexuality, 26, 41-56.
- Thompson, N., McCandless, B., & Strickland, B. (1971). Personal adjustment of male and female homosexuals and heterosexuals. Journal of Abnormal Psychology, 78, 237.
- Tindall, B., Forde, S., Goldstein, D., Ross, M.W., & Cooper, D.A. (1994). Sexual dysfunction in advanced HIV disease. AIDS Care, 6, 105-107.
- Travers, R., & Paoletti, D. (1999). Responding to the support needs of HIV positive lesbian, gay and bisexual youth. The Canadian Journal of Human Sexuality, 8, 271-283.
- Tremblay, P., & Ramsay, R. (2000). Suicidal problems of youth with homosexual or bisexual orientations: Research, problems, and proposals (translated from French). Vis-a-Vie, 10, 5-8.
- Tremblay, P.J. (1994). The gay, lesbian and bisexual factor in the youth suicide problem. Edmonton: Ministry of Education, Province of Alberta.
- Tremblay, P.J. (1995). The homosexuality factor in the youth suicide problem. Paper presented to Sixth Annual Conference of the Canadian Association for Suicide Prevention, Banff, October, 1995.
- Tremblay, P.J. (1996). 1996 update. Supplement to Tremblay (1994) in the edition being sold in British Columbia by Gay and Lesbian Educators of British Columbia. Vancouver: Gay and Lesbian Educators of British Columbia.
- Tremblay, P.J. (2000). The changing construction of male homosexuality and related suicide problems. Boulder, CO: The Gay Men's Health Summit II.

- Tremble, B. (1993). Prostitution and survival: Interviews with gay street youth. The Canadian Journal of Human Sexuality, *2*, 39-45.
- Trezza, G.R. (1994). HIV knowledge and stigmatization of persons with AIDS: Implications for the development of HIV education for young adults. Professional Psychology: Research and Practice, *25*, 141-148.
- Turner, J., Page-Shafer, K., Chin, D.P., Osmond, D., Mossar, M., Markstein, L., Huitsing, J., Barnes, S., Clemente, V., Chesney, M., & the Pulmonary Complications of HIV Infection Study Group. (2001). Adverse impact of cigarette smoking on dimensions of health-related quality of life in persons with HIV infection. AIDS Patient Care and STDs, *15*, 615-624.
- Turner, H.A., Pearlin, L.I., & Mullan, J.T. (1998). Sources and determinants of social support for caregivers of persons with AIDS. Journal of Health and Social Behavior, *39*, 137-151.
- Ungvarski, P.J., & Grossman, A.H. (1999). Health problems of gay and bisexual men. Nursing Clinics of North America, *34*, 313-331.
- Uribe, V., & Harbeck, K. (1992). Addressing the needs of lesbian, gay, and bisexual youth: The origins of PROJECT 10 and school-based intervention. In K. Harbeck (Ed.) Coming out of the classroom closet: Gay and lesbian students, teachers, and curricula (pp. 9-28). New York: Harrington Park.
- Ventegodt, S. (1998). Sex and the quality of life in Denmark. Archives of Sexual Behavior, *27*, 295-307/
- Vincke, J., De Rycke, L., & Bolton, R. (1999). Gay identity and the experience of gay social stress. Journal of Applied Social Psychology, *29*, 1316-1331.
- Vincke, J., & van Heringen, K. (1998). Suicidal ideation and behavior among homosexual adolescents and young adults: A comparative study. Paper presented at the 7th European Symposium on Suicide and Suicidal Behavior.
- Visser, A., & Antoni, M. (1994). Current perspectives on AIDS/HIV education and counseling. Patient Education and Counseling, *24*, 191-198.
- Wagner, L. (1997). Lesbian health and homophobia. Tennessee Nurse, *60*, 15-16.
- Wagner, G., Brondolo, E., & Rabkin, J. (1996). Internalized homophobia in a sample of HIV+ gay men, and its relationship to psychological distress, coping, and illness progression. Journal of Homosexuality, *32*, 91-106.
- Wagner, G.J., Ferrando, S.J., & Rabkin, J.G. (2000). Psychological and physical health correlates of body cell mass depletion among HIV+ men. Journal of Psychosomatic Research, *49*, 55-57.
- Waldo, C.R. (1999). Working in a majority context: A structural model of heterosexism as minority stress in the workplace. Journal of Counseling Psychology, *46*, 218-232.
- Waldo, C.R., Hesson-McInnis, M.S., & D'Augelli, A.R. (1998). Antecedents and consequences of victimization of lesbian, gay and bisexual young people: A structural model comparing rural university and urban samples. American Journal of Community Psychology, *26*, 307-334.
- Waller, M.A. (2001). Gay men with AIDS: Perceptions of social support and adaptational outcome. Journal of Homosexuality, *41*, 99-117.
- Warwick, I., Aggleton, P., & Douglas, N. (2001). Playing it safe: Addressing the emotional and physical health of lesbian and gay pupils in the U.K. Journal of Adolescence, *24*, 129-140.
- Washington, H.A. (2002). Burning love: Big tobacco takes aim at LGBT youths. American Journal of Public Health, *92*, 1086-1095.
- Watkins, C.E. (2000). Gender role conflict and psychological well-being among gay men. Journal of Counseling Psychology, *47*, 85-89.
- Waugh, M. (1996). Historical developments in gay health and medicine: Address to the Australasian College of Venerologists, New South Wales, Chapter Scientific Meeting, Sydney, 3 March 1995. International Journal of STD and AIDS, *7*, 71-76.
- Wayment, H.A., & Peplau, L.A. (1995). Social support and well-being among lesbian and heterosexual women: A structural modeling approach. Personality and Social Psychology Bulletin, *21*, 1189-1199.

WebMD Canada (1999). Alcoholism. On-line resource (www.my.webmd.ca).

Weinberg, M.S., & Williams, C.J. (1974). Male homosexuals: Their problems and adaptations. New York: Oxford University Press.

Welch, S., Howden-Chapman, P., & Collings, S.C.D. (1998). Survey of drug and alcohol use by lesbian women in New Zealand. Addictive Behaviours, 23, 543-548.

Wells, S.A. (1999). The health beliefs, values, and practices of gay adolescents. Clinical Nurse Specialist, 13, 69-73.

Whitcock, K. (1988). Bridges of respect: Creating support for gay and lesbian youth. Philadelphia: American Friends Service Committee.

Williams Collins, K. (1998). Bisexuality: A review of current research. Family Therapy, 25, 1-11.

Williams, M.L., Elwood, W.N., & Bowen, A.M. (2000). Escape from risk: A qualitative exploration of relapse to unprotected anal sex among men who have sex with men. Journal of Psychology & Human Sexuality, 11, 25-49.

Williams, J.B.W., Rabkin, J.G., Remien, R.H., Gorman, J.M., & Ehrhardt, A.A. (1991). Multidisciplinary baseline assessment of homosexual men with and without human immunodeficiency virus infection: II. Standardized clinical assessment of current and lifetime psychopathology. Archives of General Psychiatry, 48, 124-130.

Williamson, I.R. (2000). Internalized homophobia and health issues affecting lesbians and gay men. Health Education Research, 15, 97-107.

Wockner, R. (2000). Brazil had 169 anti-gay killings in 1999. International News, 315.

World Health Organization. (1997). Manual of the international statistical classification of diseases, injuries, and causes of death (9th rev., 5th ed.). Geneva: World Health Organization.

Wulsin, L.R. (2000). Does depression kill? Archives of Internal Medicine, 160, 1731-1732.

Yager, J., Kurtzman, F., Landsverk, J., & Wiemeier, E. (1988). Behaviors and attitudes related to eating disorders in homosexual male college students. American Journal of Psychiatry, 145, 495-497.

Yoshioka, M.R., & Schustack, A. (2001). Disclosure of HIV status: Cultural issues of Asian patients. AIDS Patient Care and STDs, 15, 77-82.

Ziebold, T.O., & Mongeon, J.E. (1982). Introduction: Alcoholism and homosexual community. In T.O. Ziebold & J.E. Mongeon (Eds.) Alcoholism and homosexuality (pp. 3-7). New York: Haworth Press.

Ziegelstein, R.C. (2001, April). Depression increases mortality in post-infarction patients. Canadian Association of Cardiac Rehabilitation.

APPENDIX: CALCULATIONS FOR HUMAN COST ESTIMATES

Homophobia and Suicide

Basic Statistics (1997)	Estimated Number of Suicides (1997)	Estimated Annual Costs (1997)
<ul style="list-style-type: none"> • GLB base rate = 5% • Total population = 29,987,200 • Non-GLB population = 28,487,840 • GLB population = 1,499,360 	<ul style="list-style-type: none"> • Completed suicides = 30% GLB • Total suicides in Canada = 3681 • Non-GLB suicides = 2577 • GLB suicides = 1104 	<ul style="list-style-type: none"> • Only 5% as opposed to 30% of completed suicides should be GLB • Non-GLB suicides constant = 2577 • Total suicides if GLB and non-GLB equivalent = 2713 • GLB suicides = 136 (instead of 1104 GLB suicides, there should be 136 so difference is 968) • Extra deaths = 968
	<ul style="list-style-type: none"> • GLB suicide rate 6 times the non-GLB rate • Total suicide rate = 0.00012275 • Non-GLB suicide rate = 0.00009820 • Non-GLB suicides = 2798 • GLB suicide rate = 0.00058921 • GLB suicides = 883 	<ul style="list-style-type: none"> • GLB and non-GLB suicides rates should be equivalent • Non-GLB suicides constant = 2798 • Total suicides if GLB and non-GLB rates equivalent = 2945 • GLB suicides = 147 (instead of 1104 GLB suicides, there should be 147, so difference is 957) • Extra deaths = 957
<ul style="list-style-type: none"> • GLB base rate = 10% • Total population = 29,987,200 • Non-GLB population = 26,988,480 • GLB population = 2,998,720 	<ul style="list-style-type: none"> • Completed suicides = 30% GLB • Total suicides in Canada = 3681 • Non-GLB suicides = 2577 • GLB suicides = 1104 	<ul style="list-style-type: none"> • Only 10% as opposed to 30% of completed suicides should be GLB • Non-GLB suicides constant = 2577 • Total suicides if GLB and non-GLB equivalent = 2863 • GLB suicides = 286 (instead of 1104 GLB suicides, there should be 286 so difference is 818) • Extra deaths = 818
	<ul style="list-style-type: none"> • GLB suicide rate 6 times the non-GLB rate • Total suicide rate = 0.00012275 • Non-GLB suicide rate = 0.00008183 • Non-GLB suicides = 2209 • GLB suicide rate = 0.00049101 • GLB suicides = 1472 	<ul style="list-style-type: none"> • GLB and non-GLB suicides rates should be equivalent • Non-GLB suicides constant = 2209 • Total suicides if GLB and non-GLB rates equivalent = 2454 • GLB suicides = 245 (instead of 1104 GLB suicides, there should be 245, so difference is 859) • Extra deaths = 859

On the surface, it seems that the estimated number of suicides as related to homophobia should be greater when the base rate of homosexuality is higher. However, this is not the case. The reason that the 5% base rate estimates are greater than the 10% base rate estimates has to do with the method of estimating the number of GLB suicides per year and the calculation of how many GLB suicides there should be if GLB and non-GLB suicide rates were equivalent. One estimate of GLB suicide rates stated that 30% of all suicides are GLB. Without homophobia, GLB should account for either 5% or 10% of suicides based on the 5% and 10% base rates of homosexuality estimates. Therefore, when calculating how many GLB suicides there should be, the 5% base rate estimate results in fewer GLB suicides than the 10% base rate estimate (136 for 5% and 245 for 10%). Therefore, the difference between how many GLB suicides there are estimated to be now (1104) compared to how many there should be without homophobia is greater for the 5% base rate estimate than for the 10% base rate (1104 - 136 = 968 for 5% base rate; 1104 - 245 = 859 for 10% with base rate). Put another way, the more GLB people there are, the greater the percentage of suicides they will account for, and so the less "extra" suicides there will be because of homophobia.

Homophobia and Smoking

Basic Statistics (1999)	Estimated Smoking Rates (1999)	Estimated Annual Costs (1999)
<ul style="list-style-type: none"> • GLB base rate = 5% • Total adult Canadian population = 24,300,000 • Total non-GLB adult population = 23,085,000 • Total GLB adult population = 1,215,000 • Total smoking related deaths = 45,000 	<ul style="list-style-type: none"> • Total smoking rate = 0.2500 • Total smokers = 6,075,000 • Non-GLB smoking rate = 0.2431 • Non-GLB smokers = 5,613,300 • GLB smoking rate = 0.3800 • GLB smokers = 461,700 	<ul style="list-style-type: none"> • Smoking rates of GLB should be equivalent to non-GLB • Non-GLB smokers constant = 5,613,300 • Total smokers if GLB and non-GLB rates equivalent = 5,908,667 • GLB smokers = 295,367 (instead of 461,700, there should be 295,367, so difference is 166,333) • Extra deaths = 1232 (Without the extra 166,333 GLB smokers, the number of annual deaths would be 43,768)
	<ul style="list-style-type: none"> • GLB smoking rate 1.6 times the non-GLB rate • Total smoking rate = 0.2500 • Total smokers = 6,075,000 • Non-GLB smoking rate = 0.2427 • Non-GLB smokers = 5,602,730 • GLB smoking rate = 0.3883 • GLB smokers = 472,270 	<ul style="list-style-type: none"> • Smoking rates of GLB should be equivalent to non-GLB • Non-GLB smokers constant = 5,602,730 • Total smokers if GLB and non-GLB rates equivalent = 5,898,611 • GLB smokers = 294,881 (instead of 472,270, there should be 294,881, so difference is 177,389) • Extra deaths = 1314 (Without the extra 177,389 GLB smokers, the number of annual deaths would be 43,686)
<ul style="list-style-type: none"> • GLB base rate = 10% • Total adult Canadian population = 24,300,000 • Total non-GLB adult population = 21,870,000 • Total GLB adult population = 2,430,000 • Total smoking related deaths = 45,000 	<ul style="list-style-type: none"> • Total smoking rate = 0.2500 • Total smokers = 6,075,000 • Non-GLB smoking rate = 0.2356 • Non-GLB smokers = 5,151,600 • GLB smoking rate = 0.3800 • GLB smokers = 923,400 	<ul style="list-style-type: none"> • Smoking rates of GLB should be equivalent to non-GLB • Non-GLB smokers constant = 5,151,600 • Total smokers if GLB and non-GLB rates equivalent = 5,724,108 • GLB smokers = 572,508 (instead of 923,400, there should be 572,508, so difference is 350,892) • Extra deaths = 2599 (Without the extra 350,892 GLB smokers, the number of annual deaths would be 42,401)
	<ul style="list-style-type: none"> • GLB smoking rate 1.6 times the non-GLB rate • Total smoking rate = 0.2500 • Total smokers = 6,075,000 • Non-GLB smoking rate = 0.2358 • Non-GLB smokers = 5,158,018 • GLB smoking rate = 0.3774 • GLB smokers = 916,982 	<ul style="list-style-type: none"> • Smoking rates of GLB should be equivalent to non-GLB • Non-GLB smokers constant = 5,158,018 • Total smokers if GLB and non-GLB rates equivalent = 5,731,012 • GLB smokers = 572,994 (instead of 916,982, there should be 572,994, so difference is 343,988) • Extra deaths = 2548 (Without the extra 343,988 GLB smokers, the number of annual deaths would be 42,452)

Homophobia and Alcohol Abuse

Basic Statistics (2000)	Estimated Alcohol Abuse Rates (2000)	Estimated Annual Costs (2000)
<ul style="list-style-type: none"> • GLB base rate = 5% • Total adult Canadian population = 24,879,199 • Total non-GLB adult population = 23,635,239 • Total GLB adult population = 1,243,960 • Total alcohol related deaths = 6930 	<ul style="list-style-type: none"> • Total alcohol abuse rate = 0.05 • Total alcohol abusers = 1,243,960 • Non-GLB alcohol abuse rate = 0.0437 • Non-GLB alcohol abusers = 1,032,487 • GLB alcohol abuse rate = 0.1700 • GLB alcohol abusers = 211,473 	<ul style="list-style-type: none"> • Alcohol abuse rates of GLB should be equivalent to non-GLB • Non-GLB alcohol abusers constant = 1,032,487 • Total alcohol abusers if GLB and non-GLB rates equivalent = 1,086,848 • GLB alcohol abusers = 54,361 (instead of 211,473, there should be 54,361, so difference is 157,112) • Extra deaths = 875 (Without the extra 157,112 GLB alcohol abusers, the number of annual deaths would be 6055)
	<ul style="list-style-type: none"> • GLB alcohol abuse rate 1.7 times the non-GLB rate • Total alcohol abuse rate = 0.05 • Total alcohol abusers = 1,243,960 • Non-GLB alcohol abuse rate = 0.0483 • Non-GLB alcohol abusers = 1,141,799 • GLB alcohol abuse rate = 0.0821 • GLB alcohol abusers = 102,161 	<ul style="list-style-type: none"> • Alcohol abuse rates of GLB should be equivalent to non-GLB • Non-GLB alcohol abusers constant = 1,141,799 • Total alcohol abusers if GLB and non-GLB rates equivalent = 1,201,665 • GLB alcohol abusers = 59,866 (instead of 102,161, there should be 59,866, so difference is 42,295) • Extra deaths = 236 (Without the extra 42,295 GLB alcohol abusers, the number of annual deaths would be 6694)
<ul style="list-style-type: none"> • GLB base rate = 10% • Total adult Canadian population = 24,879,199 • Total non-GLB adult population = 22,391,279 • Total GLB adult population = 2,487,920 • Total alcohol related deaths = 6930 	<ul style="list-style-type: none"> • Total alcohol abuse rate = 0.05 • Total alcohol abusers = 1,243,960 • Non-GLB alcohol abuse rate = 0.0367 • Non-GLB alcohol abusers = 821,014 • GLB alcohol abuse rate = 0.1700 • GLB alcohol abusers = 422,946 	<ul style="list-style-type: none"> • Alcohol abuse rates of GLB should be equivalent to non-GLB • Non-GLB alcohol abusers constant = 821,014 • Total alcohol abusers if GLB and non-GLB rates equivalent = 913,067 • GLB alcohol abusers = 92,053 (instead of 422,946, there should be 92,053, so difference is 330,893) • Extra deaths = 1843 (Without the extra 330,893 GLB alcohol abusers, the number of annual deaths would be 5087)
	<ul style="list-style-type: none"> • GLB alcohol abuse rate 1.7 times the non-GLB rate • Total alcohol abuse rate = 0.05 • Total alcohol abusers = 1,243,960 • Non-GLB alcohol abuse rate = 0.0467 • Non-GLB alcohol abusers = 1,046,321 • GLB alcohol abuse rate = 0.0794 • GLB alcohol abusers = 197,639 	<ul style="list-style-type: none"> • Alcohol abuse rates of GLB should be equivalent to non-GLB • Non-GLB alcohol abusers constant = 1,046,321 • Total alcohol abusers if GLB and non-GLB rates equivalent = 1,161,859 • GLB alcohol abusers = 115,538 (instead of 197,639 there should be 115,538, so difference is 82,101) • Extra deaths = 457 (Without the extra 82,101 GLB alcohol abusers, the number of annual deaths would be 6473)

Homophobia and Illicit Drug Use

Basic Statistics (2000)	Estimated Alcohol Abuse Rates (2000)	Estimated Annual Costs (2000)
<ul style="list-style-type: none"> • GLB base rate = 5% • Total adult Canadian population = 24,879,199 • Total non-GLB adult population = 23,635,239 • Total GLB adult population = 1,243,960 • Total illicit drug related deaths = 857 	<ul style="list-style-type: none"> • GLB illicit drug use rate 2.6 times the non-GLB rate • Total illicit drug use rate = 0.035 • Total illicit drug users = 870,772 • Non-GLB illicit drug use rate = 0.0324 • Non-GLB illicit drug users = 765,957 • GLB illicit drug use rate = 0.0843 • GLB illicit drug users = 104,815 	<ul style="list-style-type: none"> • Illicit drug use rates of GLB should be equivalent to non-GLB • Non-GLB illicit drug users constant = 765,957 • Total illicit drug users if GLB and non-GLB rates equivalent = 806,261 • GLB illicit drug users = 40,304 (instead of 104,815 there should be 40,304, so difference is 64,511) • Extra deaths = 64 (Without the extra 64,511 GLB illicit drug abusers, the number of annual deaths would be 793)
<ul style="list-style-type: none"> • GLB base rate = 10% • Total adult Canadian population = 24,879,199 • Total non-GLB adult population = 22,391,279 • Total GLB adult population = 2,487,920 • Total illicit drug related deaths = 857 	<ul style="list-style-type: none"> • GLB illicit drug use rate 2.6 times the non-GLB rate • Total illicit drug use rate = 0.035 • Total illicit drug users = 870,772 • Non-GLB illicit drug use rate = 0.0302 • Non-GLB illicit drug users = 675,599 • GLB illicit drug use rate = 0.0784 • GLB illicit drug users = 195,173 	<ul style="list-style-type: none"> • Illicit drug use rates of GLB should be equivalent to non-GLB • Non-GLB illicit drug users constant = 675,599 • Total illicit drug users if GLB and non-GLB rates equivalent = 750,666 • GLB illicit drug users = 75,067 (instead of 195,173 there should be 75,067, so difference is 120,106) • Extra deaths = 74 (Without the extra 75,067 GLB illicit drug abusers, the number of annual deaths would be 783)