FACTORS AFFECTING VULNERABILITY TO DEPRESSION AMONG GAY MEN AND LESBIAN WOMEN

by

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DECLARATION

"I declare that *Factors affecting vulnerability to depression among gay men and lesbian women* is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references."

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ABSTRACT

The present study explored factors affecting vulnerability to depression among gay men and lesbian women in metropolitan Gauteng, South Africa. Risk factors consistently cited in the literature on depression among gay men and lesbian women, namely self-esteem, social integration, hate speech, physical victimisation, fear of victimisation and alcohol and drug abuse, were examined to determine their ability to predict vulnerability to depression. Data was collected from 385 participants who self-identified as lesbian or gay, using a purposive quota sampling technique to ensure representation across age, gender, race and socio-economic status lines. Participants were selected through gay and lesbian organisations, support groups, counselling centres, the gay and lesbian Pride Parade, an online questionnaire, and via snowballing techniques. Multiple regression analysis indicated that self-esteem and hate speech were the only significant predictors of vulnerability to depression. The regression model accounted for 21.7% of the variance in vulnerability to depression scores.

KEY TERMS: Depression; Self-esteem; Social integration; Hate speech; Physical victimisation; Fear of victimisation; Alcohol use; Drug use; Gay; Lesbian

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Chapter 1

INTRODUCTION

1.1 PURPOSE OF THE STUDY

The purpose of this study is to identify the risk factors for depression among gay men and lesbian women living in metropolitan Gauteng, South Africa. To this end, the aim of this research report is to explore those factors which are shown to have a significant impact on vulnerability to depression; and to attempt to develop and validate a model which demonstrates how each of these factors results in an increased vulnerability to depression[1].

Several variables were identified as risk factors for depression, including self-esteem, the level of social integration of an individual into gay and lesbian communities, frequency of victimisation experienced (verbal, physical and sexual), and fear of victimisation. The impact on depression of substance use and disclosure of sexual orientation were also examined. Socio-demographic moderator variables such as age, race, sex and level of education were also explored.

It is imperative to emphasise that this research places the aetiology of depression within a socio-cultural context and not within the individual.

1.2 CONTEXT

This dissertation was born out of a larger research initiative to build expertise around the issues faced by gay men and lesbian women living in metropolitan Gauteng, South Africa. In order to fully understand the context within which this

[1] The understanding of depression for the purposes of this dissertation will be discussed in chapter 2.

dissertation emerged, it is necessary to discuss the background to this research project.

The need for South African research into the issues faced by gay men and lesbian women arose out of workshops conducted by a collaboration of eight organisations[2] which primarily offer services to the lesbian, gay, bisexual and transgender (LGBT) communities in South Africa[3]. This collaboration is known as the Joint Working Group (JWG). Previously, the services provided by these organisations, which include health, legal advice, media exposure, LGBT literature and support groups, were not informed by research as to whether or not their focus was appropriate.

There was a lack of expertise as to where interventions should be aimed and what the needs of South African gay men and lesbian women were. As a result, the JWG began a research initiative. OUT, a health and mental health service provider in Tshwane, Gauteng, drove the research process in conjunction with the Schorer Foundation, a national expert centre for health care for gay men and lesbian women in the Netherlands[4].

The primary objective of the collaborative research was to identify indicators of levels of empowerment among gay men and lesbian women in Gauteng, South Africa. The research, informed by both theory and the needs outlined by the JWG, covered a wide range of issues regarding gay men and lesbian women in Gauteng.

[2] These organisations were Behind the Mask, Durban Lesbian and Gay Community and Health Centre, Equality Project, Forum for the Empowerment of Women, Gay and Lesbian Archives, OUT LGBT Well-being, Triangle Project and the Unisa Centre for Applied Psychology.
[3] The Unisa Centre for Applied Psychology does not focus solely on services for LGBT communities.
[4] During my studies in research psychology, I was appointed as the researcher at OUT. This included responsibility for the entire research process, including the design, data collection and analyses.

Primary areas of investigation included:

- Socio-demographics
- Social lifestyles
- Discrimination
- Experiences of the police and criminal justice system
- Health service satisfaction
- Health status
- Alcohol and illegal substance use
- Well-being
- Religious interests and discrimination from religious authorities
- Political interests

The intention was to limit the research to metropolitan Gauteng, and then at a later stage, to conduct repeat studies in other provinces where services for LGBT communities were provided. The repeat studies would be conducted using the same methodology but with improvements identified through consideration of the limitations of the original study[5].

An important reason for limiting the research to metropolitan Gauteng was to control for the potentially confounding influence of urban / rural differences and geographical influences. South Africa has diverse representation in terms of socio-economic status, level of education, race, culture and language. Each of these variables is represented to varying degrees in different geographical areas in South Africa. For example, in Mpumalanga the main cultural groups are SiSwati- and Afrikaans-speaking, compared to Gauteng which is comprised of mainly IsiZulu-, Sesotho-, English- and Afrikaans-speaking groups. In addition, Mpumalanga is more rural, and educational levels as well as socio-economic status are generally lower than in Gauteng. To disregard the influence of these variables on the research would have been negligent. In addition, the majority of

[5] The research study has subsequently been repeated in Kwa-Zulu Natal and the Western Cape.

the JWG partners have Gauteng as their catchment area and due to scarce resources at the time it was not feasible to extend the study beyond Gauteng.

The research data obtained through the survey conducted by the JWG covered a vast range of issues. For the current dissertation, a subset of this data was utilised to identify risk factors for depression among gay men and lesbian women in metropolitan Gauteng. The reasons for choosing this particular focus area are outlined in the following section.

1.3 RESEARCH RATIONALE

Gay men and lesbian women are a population at increased risk of depression (King, McKeown, Warner, Ramsay, Johnson, Cort, Wright, Blizard & Davidson, 2003; Mays & Cochran, 2001; Meyer, 2003; Zea, Reisen & Poppen, 1999). Depression affects an estimated five to six percent of the South African population (South African Depression and Anxiety Group, n.d.). No South African research into the aetiology of depression among gay men and lesbian women is currently available[6], resulting in a reliance on international research to guide the hypotheses of this study. Although there is a substantial amount of international research, its applicability to the South African context is questionable. A brief outline of the South African context is necessary to emphasise the importance of this research and to highlight the complexities surrounding gay men and lesbian women living in South Africa.

The Nationalist Party, which was in power from 1948-1994, followed a Christian nationalist ideology and employed conservative sexual politics. The Immorality Act was adopted by the government in 1957 and later amended to become the Sexual Offences Act, with the aim of eliminating immoral sexual behaviour. The Immorality Act outlawed sex between members of different races, prostitution, ‘cruising’, and ‘immoral and indecent acts’ committed by men older than 19 years with men

[6] This assumption will be highlighted and justified in the literature review.

younger than 19 years (Potgieter, 1997; Retief, 1993). In 1988 the act was extended to include ‘immoral and indecent acts’ between women (19 years or older) and girls (under 19 years) (Potgieter, 1997). These anti-gay laws resulted in gay men and lesbian women making themselves invisible, and denied them legal recourse for victimisation (Retief, 1993).

With the dismantling of the apartheid regime, in 1996, and for the first time in the world, discrimination based on sexual orientation was prohibited through the adoption of the new South African constitution (Cock, 2003). Although homosexuality was no longer illegal, the Constitutional Court only declared all remaining provincial sodomy laws unconstitutional in October 1998 (Hoad, 1999).
The South African Constitution (1996) section 9(3) reads:

> *The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth.*

The adoption of this clause into the constitution led the way for many other legal reforms including the repeal of the sodomy laws, the establishment of immigration rights for gay and lesbian citizens, custody rights, the securing of medical aid and pension benefits for same-sex partners as well as employment equity (Nel, 2005b).

However, in spite of our liberal constitution South African gay men and lesbian women are still faced with discrimination. Although protected by the law, the translation of their constitutional rights into practice at a grassroots level is still far from real. According to Nel and Joubert (1997), discrimination against gay men and lesbian women can be broadly classified into two types, namely heterosexism (also known as heteronormativity) and homophobia. Heterosexism is defined by Nel and Joubert (1997, p. 20) as:

> *the attitude which views heterosexuality as the only acceptable, normal pattern for human relationships and tends to view all other sexual relationships as either subordinate to, or perversions of, heterosexual relationships.*

The majority of South Africans, this report would aver, have grown up in a heterosexist society that has given little recognition to gay men and lesbian women. This can be seen in the media, religion, legal discourses, education and health care. For example, high school sex education programmes focus on topics such as pregnancy and contraception that are of importance to heterosexuals. Sexual orientation is very seldom discussed even when educating about the risks of HIV transmission. The risks and prevention of HIV transmission are very different for gay men and lesbian women than for heterosexuals. Such silencing of gay and lesbian issues is a powerful form of knowledge. Silencing of a topic implies taboo and undesirability, and perpetuates prejudice (Eliason, 1996). Similarly, gay men and lesbian women are excluded from accounts of the history of South Africa in spite of their prominent role in the 'struggle' (The 'struggle' is the term coined to describe the years of activism which lead to the downfall of apartheid) (Gevisser, 1994). Gay men and lesbian women in South Africa played a role in supporting the 'struggle'. The lack of recognition of the role that they played in history could lead to assumptions that gay men and lesbian women have made no contribution to history or culture.

Heterosexism can be seen all around us in South African society. Gay men and lesbian women cannot legally get married which implies that their relationship status is somewhat inferior to that of a heterosexual relationship[7].

Living in a heterosexist society can result in homophobia (Nel, 2005a; Otis &

[7] The South African Constitutional Court has passed a judgment to have the definition of marriage reviewed to include same-sex partnerships by December 2006.

Skinner, 1996; Waldo, Hesson-McInnis & D'Augelli, 1998). Homophobia is defined as:

> *[n]egative and / or fearful attitudes about homosexuals or homosexuality* (Buston & Hart, 2001, p. 1).

Homophobia can result in prejudiced behaviour towards gay men and lesbian women. This may happen in the form of avoidance of gay men and lesbian women, telling negative jokes about gay men and lesbian women, harassment (verbal or physical threats), and violence (gay-bashing, rape, destruction of private property and murder) (Nel, 2005a; Otis & Skinner, 1996; Waldo et al., 1998). Homophobic victimisation is also referred to as hate crimes. The terms verbal victimisation and hate speech will be used interchangeably.

Living in a heterosexist, and homophobic, society creates significant stress for gay men and lesbian women. Turning to alcohol and other substances may well be a form of relief from the tremendous stress of living a lifestyle that is not socially accepted (Anderson, 1996; Gochros & Bidwell, 1996). The findings of this research report signify that this stress may well result in an increased vulnerability to depression.

However, because the social context in which gay and lesbian South Africans are living is moderated by the distinctions of race, sex and socio-economic status, gay men and lesbian women cannot be considered to be homogeneous.

White people are in general more educated and economically better off than black South Africans. The availability of resources allows white gay men and lesbian women more visibility. This has led to the misconception that being a gay man or lesbian women is a Western import and a middle-class white phenomenon that is viewed as 'un-African' by many black South Africans (Hewat & Arndt, 2003; Hoad, 1999; Reid & Dirsuweit, 2002; Theuninck, 2000).

Due to their economic status many of the gay men and lesbian women in South Africa, mostly black, are marginalised from the social and economic mainstream (Cock, 2003). Divisions across sex are also clear, due to the patriarchal nature of South African society, in which men are viewed as dominant, powerful and superior. Black lesbian women are thus exposed to marginalisation due to multiple memberships in various minority groups (Cock, 2003).

Consequently, the South African gay and lesbian population is unique with regards to the social climate, the impact of apartheid, and the influences of race, sex and socio-economic status.

As a result of these multiple influences, this research is essentially exploratory, even though international research will be used to guide the building of hypotheses and the interpretation of the data. It is hoped that the research will offer some insight into previously unexplored arenas as well as proposing questions for future research.

The focus on identifying factors which impact vulnerability to depression among gay men and lesbian women was decided for two main reasons. Firstly, the research will build much-lacking expertise around the issue of well-being amongst gay men and lesbian women.

Although there has been a lot of international research in the past regarding gay men and lesbian women, a large portion of it was conducted in an era which pathologised gay men and lesbian women (Waldo et al., 1998). Up until 1973, homosexuality was classified as a mental illness by the American Psychiatric Association in the Diagnostic and Statistical Manual of Mental Disorders (DSM). This attitude of viewing homosexuality as a disease was particularly visible in the South African Defence Force (SADF) which established a psychiatric unit for the treatment of homosexuals in 1969 (Cock, 2003). In the SADF, an unknown number of gay and lesbian conscripts were subjected to shock treatment and sex-

change operations between 1969 and 1980 (Cock, 2003). Only recently, within the past two decades, has a significant amount of research emerged that views gay men and lesbian women as expressing a normal variation of human sexual expression. One reason that has spurred interest in gay and lesbian research in recent years is the HIV/AIDS pandemic. Unfortunately, the vast majority of these studies are international. The few studies that have been done in South Africa are qualitative and very little quantitative data exists on the issues facing gay men and lesbian women (Index to South African Periodicals). Thus, the need for South African data cannot be over-emphasised.

The reason for the lack of South African research is, amongst other reasons, due to the difficulties of gaining access to gay men and lesbian women as participants, especially those who are not open about their sexual orientation. In addition, research expertise in this area is limited by a low level of interest in the field (Potgieter, 1997). The fact that gay men and lesbian women of colour were disenfranchised, and that homosexuality was illegal in South Africa prior to 1996, probably did much to contribute to this reservation about conducting gay and lesbian research.

Even after the Constitution had changed in 1996 to protect the rights of gay men and lesbian women, prejudices were still rife and it is possible that researchers, as well as research participants, were wary of the repercussions of embarking on such research. In addition to this, and possibly for the same reasons, funding was scarce, which prevented those researchers who were willing to embark on such a route, from doing so. Anecdotal evidence from the organisations forming the JWG suggests that funding for research into LGBT issues is difficult to obtain in South Africa.

Other than building expertise, a second and more practical motivation for this research project is to disseminate the findings into the public sector where this could then be utilised in the development of appropriate interventions aimed to

reduce depression among gay men and lesbian women. A large proportion of these interventions would be primary preventative interventions with a focus on awareness raising, education and diversity training. The organisations involved in the JWG would drive this process to ensure that the information reached the health, security, justice, educational and corporate sectors. In addition, the information disseminated could be used in different sectors to develop policies and procedures aimed to protect gay men and lesbian women's rights.

Secondary interventions aimed towards individuals who are experiencing depression could be implemented by health care providers such as Non-Profit Organisations (NPOs), counsellors, psychiatrists, psychologists and social workers.

Chapter 2 of this dissertation will include a discussion of the key concepts around which this study was built as well as a summary of the available international and South African research into depression among gay men and lesbian women. Chapter 3 will cover the research design and the methodology. The results will be provided in chapter 4. Chapter 5 will conclude the dissertation with a discussion of the results, conclusions, the limitations of the research and recommendations for future research.

Chapter 2

LITERATURE REVIEW

The purpose of this study is to identify risk factors for depression among gay men and lesbian women living in South Africa. The previous chapter introduced the background to this research as well as the South African context within which it emerged and the rationale behind the choice of topic. This chapter will begin with a discussion of the challenges involved in LGBT research, namely obtaining representative samples and the definitions used. Thereafter the research which has been conducted into depression among gay men and lesbian women will be reviewed, which will lead to the conclusion of the chapter, and which outlines the hypotheses for the current study.

2.1 CHALLENGES WITH SAMPLING AND DEFINITIONS

Before reviewing the studies that have been conducted into depression, well-being or emotional distress among gay men and lesbian women, it is necessary to describe the present state of research in this field with regards to sampling and definitions. Setting the methodological stage is critical as it impacts directly on the kind of inferences which can be made within the South African context, as well as the comparisons which will be made with past research.

2.1.1 Sampling

The limited use of representative samples in gay-related research is a contentious issue. Random sampling is not viable due to the reluctance of many gay men and lesbian women to disclose their sexual orientation (Hughes & Eliason, 2002; Luhtanen, 2003; McDaniel, Purcell & D'Augelli, 2001). As a result convenience samples are often used which only include participants who are willing to self-

identify as being a gay man or lesbian woman.

Historically, researchers in this field have used convenience samples that consisted of mainly white, educated, middle-class gay men and to a lesser extent, lesbian women (Hershberger & D'Augelli, 1995; Hughes & Eliason, 2002; Reid & Dirsuweit, 2002; Schippers, 2002; Theron, 1994; Theuninck, 2000). The use of this sampling method highlights the problems with generalisability of much of the current research. Even when convenience samples are used from mailing lists of organisations, membership rosters of clubs, attendees at gay and lesbian events, advertisements in gay and lesbian newspapers and snowballing through friendship networks, the sample will comprise mostly of participants willing to identify themselves as a gay man or a lesbian woman. It is possible that these participants are quite different from those who are not willing to be open about their sexual orientation. For example, individuals who are unwilling to participate could be afraid that their sexual orientation will be revealed. It is highly likely that these individuals experience heightened levels of anxiety regarding their sexual orientation due to their experiences within a predominantly heterosexist society. One could aver that they are less likely to socialise in gay and lesbian circles because of the fear of their sexual orientation being exposed. They would thus have little support regarding their sexual orientation. Hence, they could be more prone to lower self-esteem, depression and to alcohol and illegal substance abuse as a means to dull their anxiety, than gay men and lesbian women who are open about their sexual orientation and who would be willing to participate in research.

Unfortunately, due to the paucity of research that includes samples which allow comparisons to be made to South Africa, it is difficult to deduce exactly what this landscape would look like in Gauteng, South Africa. The reason for this is that South Africa's population is constituted mainly of black Africans, as opposed to blacks constituting a minority group, as in Europe, Australia and the United States of America (USA). In South Africa, during the apartheid years, black Africans were refused the same education as whites and could not obtain the employment that

white people could. This has resulted in a low level of education and a high level of unemployment amongst black South Africans even now that apartheid has been abolished. Thus the social, historical, political and cultural context is vastly different to that of white, highly educated, middle-class gay men and lesbian women elsewhere in the world. South Africa is comprised of different cultural groups and the gay and lesbian communities are diverse. The needs and problems faced by gay men and lesbian women from various cultural backgrounds may be very different.

2.1.2 Definitions

A second challenge in conducting research among gay men and lesbian women is the lack of consensus regarding definitions of sexual orientation and related concepts. This has complicated comparisons across studies and caused doubts regarding the reliability of the research (Hughes & Eliason, 2002).

Definitions differ and even criteria used to identify a participant as a heterosexual man or woman, bisexual man or woman, lesbian woman or gay man are not consistent. The choice of definition has direct implications for the interpretation of the results, the repetition of the study and potential comparisons across studies.

Sexual orientation is a complex construct. It cannot be determined solely through the sex of the individuals with whom one chooses to engage in sexual contact. It includes erotic fantasies, as well as attraction to another person (Hughes & Eliason, 2002).

The following definitions are intended to try to create a common understanding of the constructs, bearing in mind that the literature reviewed in this chapter may well not always operate according to the same semantic lexicon.

Sexual orientation refers to

> *…the erotic and affectional (or loving) attraction to another person, including erotic fantasy, erotic activity or behaviour, and affectional needs* (Cabaj, Gorman, Pellicio, Ghindia & Neisen, 2001, p. 5).

In essence, sexual orientation is not comprised of discrete categories. It can be viewed as a continuous construct ranging from same-sex attraction only, to opposite-sex attraction only (American Psychological Association, 2005).

Lesbian woman / gay man refer to a woman or man whose

> *primary sexual and emotional attractions are to persons of the same sex* (Hughes & Eliason, 2002, p. 266).

Bisexual refers to

> *men or women who have sexual and emotional attractions to both men and women* (Hughes & Eliason, 2002, p. 266).

Bisexual individuals are not necessarily simultaneously involved with both men and women.

Heterosexual refers to

> *a man or woman who has a sexual and emotional attraction to people of the opposite sex* (Cabaj et al., 2001, p. 4).

Intersex refers to individuals who are

> *born with reproductive organs and / or chromosomes that are not exclusively male or female* (Nel, 2005a, p. 5).

Intersex people were previously referred to as hermaphrodites.

Sex refers to the

> *biological distinction between males and females* (Cabaj et al., 2001, p. 4).

Gender implies

> *…maleness and masculinity or femaleness and femininity* (Cabaj et al., 2001, p. 5).

What is considered masculine or feminine is not absolute, but rather socially determined and dependent on the culture of the individual.

Gender identity, like sexual orientation, is a complex construct. Some individuals experience conflict between their physical bodies and their psychological affiliation to the opposite sex. For example, a woman may feel more psychologically male than female.

Transsexual refers to

> *An individual with biological characteristics of one sex who identifies himself or herself as the opposite gender…Transsexuals usually desire to change their bodies to fit their gender identities and do this through hormone treatment and gender reassignment surgery* (US Department of Health and Human Services, 2001, p. 165).

Transvestite refers to transsexual individuals who do not undergo surgical realignment but conform to opposite sex gender roles to varying degrees. This includes transvestites who are individuals who either chose to wear ‘drag’, i.e. wear clothes of the opposite sex, as well as those who conform to many of the behaviours of the opposite sex but do not wear drag. The term used to encompass the diverse expression of opposite gender role affiliation is transgender (Eliason, 1996; Hughes & Eliason, 2002).

In summary, transgender refers to individuals who conform to opposite-sex gender

role expectations as prescribed by their social and cultural context. A transgender person may be attracted to males, females or both. Thus sexual orientation and gender identity are separate issues and should not be confused (Eliason, 1996). Although sexual orientation and gender identity are separate issues, gay, lesbian, bisexual, transgender and intersex individuals are all marginalised within a heterosexist society. This marginalisation has resulted in the inclusion of the needs of transgendered, and to a lesser extent, intersex individuals, in efforts to bring about equality before the law, regardless of sexual orientation (Nel, 2005a). It has become standard practice in academic literature to use the acronym LGBT, although the use of the term is essentially political rather than scientific (Nel, 2005a).

It is important to note that although these definitions are used to create a common understanding of the concepts involved in this research, they are by no means intended to limit diversity to one or more of these categories. To imply that any individual classified into one or more of the above categories, possesses the dimensions of that category in totality, could be termed reductionist, for LGBT groups are neither discrete in their behaviours nor expression.

To further demonstrate this heterogeneity in South Africa, one could consider for example, a lesbian sample that includes, other than women who are exclusively involved with women, also women who have been previously married or who are still married, as well as women who have sex with men for drugs, survival or financial gain, or who have been raped by men. Some women who have sex with other women (WSW) would not self-identify as being lesbian women. Similarly, there are men who have sex with men (MSMs) who do not consider themselves gay men. This could be related to the confusing myth held by many black South Africans that being a gay man or lesbian woman is ‘un-African’ (see chapter 1). Although there is a belief that being a gay man or a lesbian woman is ‘un-African’, it is in fact the Western identity of a gay man or a lesbian woman that is ‘un-African’ as opposed to same-sex sexual orientation (Hoad, 1999; Lind, 2006).

According to a 1995 survey conducted by the Human Sciences Research Council on South African public attitudes on issues concerning gays, lesbians and AIDS, 41% of the black sample thought that homosexuality was 'un-African' (Reid & Dirsuweit, 2002). Thus it is imperative to recognise that gender identity is not homogenous amongst gay men and lesbian women. The gender identity that one chooses to assume also has implications regarding levels of social acceptance and anxiety experienced.

This inherent heterogeneity of gay men and lesbian women's identities makes comparisons across studies difficult and inferences in South Africa problematic. For example, some studies will include MSMs and bisexuals and others not. Similarly, transgender individuals are not always included. What further complicates this arena is that issues facing these groups can be very different. The inclusion or exclusion of them has to be carefully considered before comparing studies and interpreting or generalising results.

In terms of sexual orientation, the research originally conducted for the JWG included gay, lesbian and bisexual individuals. Transgendered individuals who exhibited exclusively opposite-sex sexual orientation were excluded. However, for this dissertation bisexual people were excluded from the analyses to avoid skewed results. This is not to say that their issues and experiences are less important, just that their issues are too complex to be included in the scope of this research. To give an idea of this complexity, bisexual individuals are more integrated into mainstream culture and can 'pass' as being heterosexual. Bisexuals are thus not marginalised to the same extent that gay men and lesbian women are. Thus living in a predominantly heterosexist society may not have the same impact on their mental health that it does for gay men and lesbian women. Self-identification as a gay man or lesbian woman was used to assess sexual orientation as it was felt that self-identification is the most appropriate and respectful way to identify the various individuals.

In sum, in the review of the literature that follows, it must be emphasised that samples and definitions differ across studies and direct inferences in terms of the South African context cannot be easily made. Although trends that emerge as a result of the findings can be used to develop hypotheses regarding the situation in South Africa, the nature of this particular study should be viewed as exploratory.

2.2 AETIOLOGY OF DEPRESSION

Depression can result from a number of factors that include the biological, psychological and social. According to the medical model, it can also manifest in different ways and is classified into several categories, such as major depressive disorder, dysthymic disorder and bipolar disorder (Barlow & Durand, 1999). Although the biological causes of depression are not disregarded, this research has focused on the social-cultural stressors that can result in an increased vulnerability to depression. Depression was not categorised as a specific disorder nor was it viewed as part of the individual. An ecosystemic stance was taken in which vulnerability to depression emerges as a result of the socio-cultural context in which the individual operates. Thus this research has not explored depression but rather a vulnerability to depression indicated through particular symptoms of depression. These symptoms included some of the somatic symptoms of depression such as insomnia or oversleeping, appetite gain or loss, headaches and loss of energy. Apart from the somatic symptoms, thoughts of suicide were also taken to be an indication of vulnerability to depression.

Gay men and lesbian women experience stress as a result of their membership of a stigmatised social minority (Vincke & van Heeringen, 2002; Waldo et al., 1998). Increased stress from various sources, including victimisation and lack of support, may lower self-esteem which places one at higher risk for mental health problems, including depression (Zea et al., 1999). Similarly, a fear of victimisation can result in a non-disclosure of one's sexual orientation which in turn could leave one unsupported and vulnerable to depression. This may result in the excessive use of

alcohol and drugs as a means to reduce the stress, which instead accentuates the risk for depression.

Living in a homophobic society results in a significant amount of stress. As a result all gay men and lesbian women learn to internalise homophobia to a varying degree (Anderson, 1996; Cabaj et al., 2001; Szymanski & Chung, 2001). This is particularly evident in adolescents, prior to their accepting their same-sex sexual orientation and disclosing this to friends and / or family. Buston and Hart (2001, p.2) define internalised homophobia as:

> *The gay person's direction of negative social attitudes toward the self, leading to a devaluation of the self and resultant internal conflicts and poor self-regard.*

The stress gay men and lesbian women experience when disclosing their sexual orientation, as well as internalised homophobia, can result in depression, thoughts of suicide, suicide attempts and in the worst cases, successful suicide (Gibson, 1989).

Suicide and suicide attempts can therefore be a consequence of depression (Jernewall, 2004; Savin-Williams & Ream, 2003). Low self-esteem and substance abuse may also elevate levels of suicide ideation and suicide attempts (Jernewall, 2004; Savin-Williams & Ream, 2003). Gay and lesbian adolescents, in particular are at risk for suicide.

International researchers have tried to identify the risk factors for depression among gay men and lesbian women. These factors will be discussed in the following sections.

2.2.1 Self-esteem

Self-esteem is an indication of the degree to which one values oneself, with high self-esteem being an indication of a positive view of oneself and low self-esteem indicating a negative view of oneself.

In the USA, several studies of gay men and lesbian women have shown that self-esteem and depression are strongly related, with higher self-esteem resulting in lower levels of depression (D'Augelli, Grossman, Hershberger & O'Connell, 2001; Luhtanen, 2003; Otis & Skinner, 1996; Zea et al., 1999). The samples in all the studies were convenience samples with participants being recruited through gay and lesbian networks and / or snowball sampling. In some cases bisexuals were included and in others not. As participants in these studies differ substantially from those representing the South African context in terms of age, educational level and race, it is difficult to make inferences.

In a study conducted by D'Augelli et al. (2001), elements of mental health were examined among 416 elderly (60-90 years old), lesbian, gay and bisexual adults in the USA and Canada. Participants self-identified as gay, lesbian or bisexual. The sample was achieved through agencies which provided social and recreational services to lesbian, gay and bisexual adults. Questionnaires measuring information about internalised homophobia, self-esteem, loneliness, alcohol abuse, drug abuse, and suicidality were completed by participants and returned to the contact person of each agency.

Self-esteem was measured using Rosenburg's (1965, 1979) 10-item scale. Mental health was measured using questions designed specifically for the elderly (D'Augelli et al., 2001). Although this was not a depression scale, one could assume that increased depression will result in lower mental health. Results indicated a positive correlation between self-esteem and mental health ($r = 0.49$, $p < 0.001$), which implies that a further relationship between increased self-esteem

and decreased depression can be hypothesised. Considering the age group of their sample and the fact that bisexuals were included, it is difficult to compare these results to the current study that has excluded bisexuals as well as not specifically targeted elderly gay men and elderly lesbian women.

Research conducted by Zea et al. (1999) supports the notion that there is a relationship between self-esteem and depression. Their research sampled 106 Latino gay men and lesbian women in the USA through gay events, conferences and workshops. Ages ranged from 20 to 53 years, and 60% of the participants had a bachelor's degree or attended graduate school.

Self-esteem was measured using Rosenberg's (1965) Self-Esteem Scale and depression was measured using the Beck Depression Inventory. In addition to these variables, collective self-esteem (identification with the gay and lesbian Latino community), social support and active coping were also measured (Zea et al., 1999).

Results reported significant negative correlations between depression and self-esteem ($r = -0.56$, $p < 0.0001$), active coping ($r = -0.55$, $p < 0.0001$) and social support ($r = -0.55$, $p < 0.0001$) (Zea et al., 1999). A considerable limitation of this study is the bias towards participants who were willing to disclose their sexual orientation and meet with other gay men and lesbian women in public settings (Zea et al., 1999). There was no representation of those who were less integrated into gay and lesbian communities (Zea et al., 1999). As has been stated earlier, these individuals may well experience lower levels of self-esteem, social support and active coping, as well as higher rates of depression due to possible conflict relating to their sexual orientation. Similarly, individuals who are not highly educated may well have access to different social support systems and active coping mechanisms.

In support of the relationship between self-esteem and depression, Grossman and

Kerner (1998) found self-esteem to be a significant predictor of emotional distress among gay and lesbian youth in New York in the USA. Ninety self-identified gay and lesbian youths were sampled from a drop-in centre serving LGBT youth in New York. The majority of the participants were black or Latino, with ages ranging from 14 to 21 years (Grossman & Kerner, 1998).

The Rosenberg Self-Esteem Scale was included in the questionnaire, as well as the Brief Symptom Inventory that was used to measure emotional distress (Grossman & Kerner, 1998). Although emotional distress encompasses depression as well as other elements, one can assume that increased depression results in increased emotional distress. Satisfaction with one's support network was also measured.

A multiple regression analysis was conducted to determine the impact that self-esteem and satisfaction with support had on emotional distress. Self-esteem accounted for 35% of the variance and satisfaction with support had no significant contribution to the variance (Grossman & Kerner, 1998). The adjusted R^2 was 0.35.

Although these studies differ considerably in terms of sample and the scales used in the measure of depression / mental health, the relationship between self-esteem and depression / mental health is consistent. The results of these findings create a working context for validating the hypothesis that low self-esteem is a risk factor for depression, with higher self-esteem resulting in a decreased vulnerability to depression.

2.2.2 Social support and level of disclosure of sexual orientation

Increased self-esteem is associated with accessibility to effective coping mechanisms (Otis & Skinner, 1996; Zea et al., 1999). Social support can be viewed as one such coping mechanism. Evidence suggests that increased social

support reduces stress and the probability for depression (Luhtanen, 2003; Oetjen & Rothblum, 2000; Otis & Skinner, 1996; Vincke & Bolton, 1994; Vincke & van Heeringen, 2002; Zea et al., 1999).

Social support refers to social relationships which are both positive and endorsing. Adequate and appropriate social support is integral to the alleviation of stress and has been shown to be related to lower rates of depression among gay men and lesbian women (Luhtanen, 2003; Oetjen & Rothblum, 2000; Otis & Skinner, 1996; Vincke & Bolton, 1994; Vincke & van Heeringen, 2002; Zea et al., 1999). These studies involved convenience samples, with participants being recruited through snowball sampling and LGBT organisations. Participants included a wide range of age, race and educational groups.

Social support can be viewed as a preventative factor for depression if the social support is from positive role models. In fact, several studies have indicated that sources of resilience such as family acceptance, supportive social networks, and participation in social activism help to moderate the negative impact of social discrimination on the mental health of gay men and lesbian women (Diaz, Ayala, Bein, Henne & Marin, 2001; Vincke & van Heeringen, 2002).

Wethington and Kessler (cited in Vincke & van Heeringen, 2002) showed that the positive impact of social support was linked to the perception that support was available rather than the effects of actual supportive behaviours. In general, people who perceive higher levels of social support report lower rates of depression regardless of whether the reality involves a higher level of actual social support (Vincke & van Heeringen, 2002).

A longitudinal study conducted by Vincke and van Heeringen (2002) in Belgium demonstrated that the support and quality of gay and lesbian relationships were more important influences on mental well-being than parental awareness and acceptance. It must be borne in mind that this sample was taken from a holiday

camp for gay and lesbian young adults up to 25 years. The respondents self-identified as gay men and lesbian women, were open about their sexual orientation and had family support. One could aver that the results would differ if a more representative sample was used. It is difficult to predict whether gay and lesbian relationships would be more important than family support in South Africa. In many South African cultures the role of the family is a primary one (Hoad, 1999). It could be that in this socio-cultural context, parental awareness and acceptance may well be more important for well-being.

Oetjen and Rothblum (2000) conducted research into women and depression in the USA. They sampled 167 lesbian women between 20 and 60 years. The women were sampled using snowball techniques. The researchers identified lesbian women known to them, and asked them to recruit friends, acquaintances and colleagues who were lesbian. The researchers also identified respondents through stores, businesses, organisations and health centres that had lesbian women as clientele. The women identified themselves as lesbian. Surveys from women who identified themselves as bisexual were excluded from the analyses (Oetjen & Rothblum, 2000).

The results indicated that perceived social support from friends, relationship status satisfaction and perceived social support from family were significant predictors of depression (lower social support increases depression) and accounted for 17.8% of the variance in depression scores (Oetjen & Rothblum, 2000).

Westfield, Maples, Buford and Taylor (2001) investigated loneliness, depression and suicidal risk amongst 70 college students in Iowa, America. The students self-identified themselves as gay men, lesbian women, or bisexual and were between the ages of 18 and 29 years. The sample was obtained from gay and lesbian student organisations represented in five colleges. They found that compared to heterosexual students the gay and lesbian students were more depressed, lonelier and had fewer reasons to live. Depression and loneliness were positively

correlated. Results from some open-ended questions indicated that many of the participants who had disclosed their sexual orientation experienced lack of understanding from family and alienation from peers (Westfield et al., 2001).

Social support implies that a gay man or lesbian woman has vocalised their sexual orientation. Choosing to disclose one's sexual orientation ('coming out') to family or friends can cause a considerable amount of anxiety in gay men and lesbian women. Prior to disclosure, this anxiety is related to fears of rejection and isolation (Oetjen & Rothblum, 2000). Choosing not to come out can result in the stress that results from keeping one's sexual orientation hidden. In order to conceal their sexual orientation, gay men and lesbian women must constantly be careful and often prefer to withdraw from people rather than risk exposure (Oetjen & Rothblum, 2000). This can result in depression, lack of social support and possible substance abuse (Oetjen & Rothblum, 2000). However, coming out can be a positive experience. Schmitt and Kurdek (cited in Oetjen & Rothblum, 2000) found that gay men who were out were less depressed and less anxious.

Social support is inextricably linked to social integration into gay and lesbian communities and self-disclosure of sexual orientation. Gay men and lesbian women who hide their sexual orientation isolate themselves from gay and lesbian communities which are a potentially valuable network of social support. Consequently, their isolation for fear of disclosure leads to reduced social support, loneliness and an increased risk of depression (Oetjen & Rothblum, 2000).

Luhtanen (2003) conducted a survey in the Greater Buffalo area in the USA to investigate predictors of well-being in gay men, lesbian women and bisexual adults. The sample of 320 comprised of 52.5% women and 47.5% men who self-identified as being lesbian, gay or bisexual. Ages ranged from 19 to 73 years. The majority of the sample was white (92%) and well-educated, with most having a college or graduate degree. Again, due to issues around representivity, inferences relating to the South African context are not possible.

Luhtanen (2003) investigated the impact of several variables on self-esteem, depression and life satisfaction. These variables included involvement in the lesbian / gay / bisexual culture, rejection of negative stereotypes, positivity of gay and lesbian identity and perceived acceptance by family, heterosexual friends, and work / school associates.

Involvement in the lesbian / gay / bisexual (LGB) sub-culture was measured through two questions. The first related to the number of friends one had who were gay, lesbian or bisexual and the second referred to the portion of leisure time spent with gay men, lesbian women and bisexuals. Depression was measured using the 20-item Center for Epidemiologic Studies Depression Scale (Luhtanen, 2003).

Results indicated a significant negative correlation between depression and social involvement with other gay men, lesbian women and bisexuals. This was true for both men ($r = -0.16$, $p < 0.01$) and women ($r = -0.18$, $p < 0.05$). In the multiple regression analysis, no significant contribution was made by social involvement with other gay men, lesbian women and bisexuals to the variance in depression scores (Luhtanen, 2003). A positive LGB identity (Beta = -0.26, $t = -2.30$, $p = 0.03$) and the rejection of negative stereotypes (Beta = -0.26, $t = -2.10$, $p = 0.04$) were the only two significant predictors, accounting for 25% of the variance in depression scores among lesbian / bisexual women. For gay / bisexual men, a positive LGB identity was the sole predictor (Beta = -0.36, $t = -3.61$, $p = 0.001$). These findings counter those by Oetjen and Rothblum (2000) which showed that social support was a negative predictor of depression, although Oetjen and Rothblum looked at social support from friends in general and Luhtanen investigated support from heterosexual friends.

Contrary to the majority of findings but in support of those found by Luhtanen (2003), Grossman and Kerner (1998) found social support to be an insignificant predictor of emotional distress. They examined the impact of self-esteem and

satisfaction with supportiveness as predictors of emotional distress among 90 gay and lesbian youth (14 to 21 years) in the USA. Participants were mainly black or Latino, recruited through a gay and lesbian support centre in New York. Grossman and Kerner (1998) did not differentiate between different types of social support (parents, friends, teachers, LGBT role models, etc.). It is possible that distinguishing between the different types of social support may be more effective in predicting depression (Grossman and Kerner, 1998).

Although the present study does not measure perceived satisfaction with social support, the level of integration into gay and lesbian communities, as well as the self-disclosure of one's sexual orientation are measured and can be deduced to be an indication of social support. It is hypothesised that social integration and self-disclosure are predictors of vulnerability to depression. A higher level of integration into gay and lesbian communities as well as self-disclosure regarding sexual orientation will result in a decreased vulnerability to depression.

2.2.3 Victimisation

In spite of the South African constitution which protects the rights of gay men and lesbian women in South Africa, extreme violence targeted at gay men and lesbian women still prevails (Reid & Dirsuweit, 2002; Theuninck; 2000). Statistics on homophobic hate crimes are not kept by the South African government which serves to increase the invisibility of gay men and lesbian women. Very little research exists around the victimisation of gay men and lesbian women in South Africa and those that do focus primarily on gay white men (Reid & Dirsuweit, 2002; Theuninck; 2000). Of the research that does exist, the impact of victimisation on depression is not explored.

Two South African quantitative surveys have been conducted which provide some statistics into the incidence of hate crimes. Although these studies are limited in terms of representivity they do give some indication of the seriousness and

prevalence of homophobic violence.

Theron (1994) sampled 611 gay men and lesbian women, of whom 92% were male. The majority of the sample comprised of white South Africans. Results showed that 67% of the sample had been subjected to hate speech; 22% had been punched, hit or kicked; 8% had experienced weapon assault; and 22% had experienced sexual assault.

Similarly, a study conducted by Theuninck (2000) indicated that 75% had experienced hate speech; 22% had been punched, hit or kicked; and 17% had been subjected to sexual assault. The 329 participants in Theuninck's survey were mainly white males (73.8%). The participants were highly educated, with 71.2% completing or having completed some form of tertiary education.

In the research conducted by Theuninck (2000), a convenience sample was obtained by snowball sampling through contacts made through night-clubs, personal networks and socio-political organisations. Advertisements were also placed in three gay publications and on a South African gay website, inviting participation. Questionnaires were self-completed and participants self-identified as being gay men. A multiple regression was conducted with Post-Traumatic Stress Disorder (PTSD) as the dependent variable. Gay victimisation was a significant predictor (Beta = 0.216, $p < 0.001$) of PTSD. The entire model accounted for 41.7% of the variance (Theuninck, 2000). Although Theuninck (2000) did not explore the effects of the trauma leading to depression, this could be hypothesised.

No quantitative research has been reported in South Africa which contains more representative samples in terms of race and socio-economic status (Reid & Dirsuweit, 2002).

FEW (Forum for the Empowerment of Women), a community based organisation

in Johannesburg, has conducted unpublished research which indicates that lesbian women are a target for rape. This is particularly the case for black lesbians living in townships who are more visibly lesbian due to their so-called masculine traits. Forty-six black lesbians were interviewed, of whom 41% had been raped, 9% had been victims of attempted rape, 37% had been victims of assault, and 17% victims of verbal abuse (cited in Nel, 2005a).

International research has explored the consequences of victimisation on the psychological well-being of gay men and lesbian women. Consequences range from minor reactions such as headaches, restlessness and sleep disturbances to more long-term reactions such as depression, post-traumatic stress disorder, increased substance use (alcohol and drug) and suicidal ideation and attempts (Herek, Gillis, Cogan & Glunt, 1997; Hershberger & D'Augelli, 1995; Mays & Cochran, 2001, Otis & Skinner, 1996; Ryan & Rivers; 2003). Although the mental health consequences of victimisation are vast, and cannot be ignored, the focus of this research is limited to the role victimisation plays on vulnerability to depression.

Determining the impact that victimisation has on depression formed the basis of an investigation by Otis and Skinner (1996) in research conducted in the USA. Social support, self-esteem, external stress and internalised homophobia were also measured. Participants who self-identified as being a gay man or lesbian woman were sampled using organisational mailing lists, snowball sampling and through gay events. Surveys were self-completed by the 1 067 participants, who were predominantly white (93.3%), urban (80.2%), well-educated (average of 15.1 years education) and middle-aged (average 34.4 years) (Otis & Skinner, 1996).

Victimisation was measured through 15 questions relating to the type of victimisation experienced in the past two years. This included verbal, physical and sexual assault, as well as robbery, theft and vandalism. Depression was measured using a random sample of 10 questions from the Centre for Epidemiological Studies Depression Scale (Otis & Skinner, 1996).

Results indicated that more than 50% of the gay men and lesbian women had experienced at least one form of victimisation, the most prevalent form being hate speech, followed by theft / vandalism (Otis & Skinner, 1996). Multiple regression analysis was conducted on results from the gay men and lesbian women separately to determine the effects that victimisation, social support, self-esteem, external stress, internalised homophobia and age had on depression. For the gay men, the model accounted for 43% of the variance in depression. Victimisation, social support, internalised homophobia, self-esteem and age were significant predictors for depression. Self-esteem had the greatest impact (Beta=-0.52, $p<0.05$) on depression. Similarly for the lesbian women, the model accounted for 42% of the variance in depression, with victimisation, social support, self-esteem and external stress being significant predictors of depression. Self-esteem also had the greatest effect on depression (Beta=-0.44, $p<0.05$) (Otis & Skinner, 1996).

Contrary to many studies indicating a link between victimisation and psychological well-being, Waldo et al. (1998), found no direct association between victimisation and psychological distress. They found that victimisation leads to lowered self-esteem which increases psychological distress. Thus self-esteem mediates the impact of victimisation on psychological distress.

Fear of crime and victimisation can also result in psychological distress and anxiety (Smith & Glanz, 1996). In the general population in South Africa, Smith and Glanz (1996) found that 65% of whites and 54% of blacks who perceived themselves to be at risk for victimisation, were afraid of crime. Interestingly, the black sample reported higher rates of victimisation than the white sample yet had a lower fear rate. Smith and Glanz (1996) explained that a sense of security may be reinstated through a denial of the risk for victimisation. The results from their research indicated that there could be a threshold up to which fear of crime increases in relation to perceived risk for victimisation. Beyond this threshold, individuals could begin to deny their high risk for victimisation and fear of crime decreases.

For the present study it is hypothesised that victimisation and fear of victimisation are predictors of increased vulnerability to depression, with higher rates of victimisation and higher levels of fear of victimisation resulting in significantly more symptoms of depression.

2.2.4 Alcohol and drug use

Several international studies have suggested that gay men and lesbian women are at greater risk of substance use disorders than heterosexuals (Anderson, 1996; Hughes & Eliason, 2002; Jordan, 2000; Orenstein, 2001; Sandfort, de Graaf, Bijl & Schnabel, 2001). Although early reports showed that alcohol and drug use amongst gay men and lesbian women are substantially high, more recent research indicates lower rates (Hughes & Eliason, 2002).

The influence of age, sex, race, education, religion, health status, cultural background and employment status on rates of alcohol and drug use among gay men and lesbian women is under-researched (Hughes & Eliason, 2002). There is no apparent reason why these variables, shown to have a significant influence in the general population, should have a different influence among gay men and lesbian women.

The following review will consider the most recent research that has been conducted in the area of alcohol and drug abuse among gay men and lesbian women. Possible developmental differences will also be discussed. Unfortunately, virtually no South African research has been conducted and thus research from Holland, the USA and Australia will be reported.

Research conducted in the USA by Cochran and Mays (2000) found that people with opposite-sex partners were less likely to abuse substances than people with same-sex partners. When lesbian women were compared to heterosexual women it was found that alcohol use rates were much higher amongst lesbian women.

Lesbian women used alcohol twice as often as heterosexual women and were five times more likely to use alcohol everyday. Lesbian women were also twice as likely to get intoxicated (Cochran & Mays, 2000). Gay men showed no significant difference with alcohol abuse when compared with heterosexual men (Cochran & Mays, 2000).

In a 1995 National Household Survey on Drug Abuse (NHSDA) in the USA, it was found that MSMs were 21 times more likely to use nitrite inhalants and four to seven times more likely to use hallucinogens, stimulants, sedatives, and tranquillisers than the heterosexual men in the NHSDA sample (Cabaj et al., 2001). Women were not included in this survey so little is known about lesbian women and drug abuse. This research does not enable accurate predictions about the situation in South Africa among gay men and lesbian women. This is due to the fact that a representative sample in South Africa would differ greatly compared to a representative sample in the USA. Such differences include race, socio-economic status, employment status, access to drugs and type of available and affordable drugs.

In the USA various drugs seem to play a role in the LGBT sub-culture, especially in urban communities (Cabaj et al., 2001). These include metamphetamine, also known as speed. Party drugs, for example ecstasy, ketamine and GHB (gamma hydroxybutyrate) are becoming more and more popular at raves and clubs (Cabaj et al., 2001). Amphetamines and metamphetamines result in dependence and addiction (Cabaj et al., 2001). Prolonged use of these kinds of drugs can lead to severe depression, paranoia and possibly aggression (Cabaj et al., 2001).

It is difficult to determine what the situation in South Africa or Gauteng is regarding the taking of drugs in the gay and lesbian culture. Anecdotal evidence suggests that there is a drug-taking sub-culture amongst young and middle-aged gay men and lesbian women. It is unclear whether in general this sub-culture abuses drugs or uses them recreationally. It is possible that there is no link in this context with

the stressors related to sexual orientation. There is a rave sub-culture present in South Africa in which recreational drug use (predominantly stimulants) is common (Willmers, 2001). It could be that the drug use amongst young gay men and lesbian women is linked with the rave sub-culture rather than with stress due to sexual orientation.

D'Augelli et al. (2001) investigated the mental health of 416 self-identified lesbian, gay and bisexual (LGB) adults between the ages of 60 and 91 years who were attending social and recreational programmes. Included in the investigation were measures of alcohol and drug abuse, internalised homophobia and time spent with LGB people. Current alcohol use was measured using AUDIT (Alcohol Use Disorders Identification Test) and drug abuse was assessed by DAST (Drug Abuse Screening Test). In this study the coefficient alpha for AUDIT was 0.77 and for DAST 0.62. D'Augelli et al. (2001) found that men (11%) showed more evidence of alcohol abuse than women (4%). Of the entire sample only 9% fell into the category of problem drinkers and 83% showed no evidence of drug abuse. A significant negative correlation was found between time spent with LGB people and scores on AUDIT ($r = -0.11$, $P < 0.05$), as well as scores on the DAST ($r = 0.16$, $p < 0.05$). This could be indicative of the importance of social support in preventing alcohol and drug abuse. Time spent with positive LGB role models, especially in a context outside of bars and clubs could help to reduce anxiety, loneliness, depression and hopelessness. This in turn could help reduce substance abuse. No significant correlations were found between internalised homophobia and alcohol or drug abuse (D'Augelli et al., 2001).

A concern of the research conducted by D'Augelli et al. (2001) is that the majority of the sample (65%) had a bachelor's or higher degree, and 90% were identified as white. Clearly this is not a representative sample and to make inferences to the situation in South Africa would be careless.

Substance use seems to be more pronounced amongst adolescents. Orenstein

(2001) conducted research on 2 946 students from a multi-ethnic school in Massachusetts, USA. Sexual orientation was measured from 5 items. An example of one such item is:

> *Have you ever had sexual thoughts or romantic feelings about someone of the same sex?*

Possible responses were “yes”, “no” and “not sure”. Those who answered 3 or more items in a same-sex direction comprised 3.1% of the sample. Standard items were used to measure substance use.

Results indicated that lesbian women are more likely than gay men to use alcohol. Fifty-three percent of the lesbian women vs. 37% of the gay men consumed alcohol in the last month (Orenstein, 2001). No differences were found in heavy drinking. It appeared that gay men were more likely than lesbian women to use ‘hard’ drugs, since 41% of gay men as opposed to 24% of lesbian women had used drugs other than marijuana or alcohol in the previous month (Orenstein, 2001). No differences were found between gay men and lesbian women regarding marijuana use.

Compared with the heterosexual group (31%), gay men and lesbian women were more likely to have consumed alcohol (47%) in the previous month (Orenstein, 2001). They were also more likely to use each of the nine drugs investigated (marijuana, inhalants, cocaine or crack, LSD, other psychedelics, amphetamines, barbiturates, tranquillisers and heroin). Excluding marijuana, between 1% and 2% of the heterosexual sample had used one or more of the drugs in the previous month, as opposed to between 14% and 20% of the gay and lesbian group (Orenstein, 2001). Marijuana use was 14% for the heterosexual group and 40% for the gay and lesbian group (Orenstein, 2001).

Orenstein (2001) suggests that substance use amongst gay men and lesbian women is a result of the stress caused by the stigmatisation of having a

marginalised sexual orientation. A critical factor here is that the social lifestyle that many adolescent gay men and lesbian women adopt leans towards potential substance abuse. For many adolescents, bars and parties are their only immediate access into gay communities. Thus alcohol and drugs are readily available.

Prior to the research conducted by Orenstein in 2001, a study was done in 59 schools in Massachusetts (Garofalo, Wolf, Kessel, Palfrey & DuRant, 1998). It was found that 2.5% of the students identified as gay, lesbian or bisexual. Compared with the heterosexual sample, the LGB students were more likely to use alcohol before the age of 13 (59% vs. 30%), use marijuana (69% vs. 47%), use cocaine (33% vs. 7%) and share needles (16% vs. 1%).

One needs to be cautious when interpreting these results, so as not to imply that being LGB causes substance abuse. It is rather the stress associated with coping with their sexual orientation in a society that is often homophobic and heterosexist that results in substance abuse (Jordan, 2000).

Sandfort et al. (2001) have reported in a household study conducted in Holland, that the differences in substance use disorders were gender specific. Substances investigated included alcohol and other drugs, including sedatives, hypnotics and anxiolytics. To identify gay men and lesbian women, participants in this study were asked verbally if they had had sexual contact with someone of the same sex within the last year. Participants who had had sexual contact with someone of the same sex were classified as gay or lesbian (Sandfort et al., 2001). This classification did not take into account whether the same sex sexual contact was predominant or not. Thus the classification could have included bisexuals in the gay and lesbian group and excluded gay men and lesbian women who had had no sexual encounters in the last year.

Results indicated that the only significant difference between gay men and heterosexual men was that lifetime alcohol abuse was more frequently observed in

heterosexual men (Sandfort et al., 2001). There were no differences in the use of other drugs. In women however, substance use disorders were significantly higher among lesbian women than heterosexual women (Sandfort et al., 2001). Lifetime prevalence of both alcohol and other drug dependence was significantly higher among lesbian women than among heterosexual women (Sandfort et al., 2001).

In contrast to the other studies discussed, in research conducted in Australia by Jorm, Korten, Rodgers, Jacomb and Christensen (2002) into sexual orientation and mental health, no significant differences were found between the bisexual, heterosexual and homosexual groups with regards to alcohol use disorders. Alcohol misuse was assessed by the Alcohol Use Disorders Identification Test (AUDIT). The sample was obtained by selecting people at random from the electoral roll, sending them a letter informing them about the research and asking them to participate (Jorm et al., 2002). A total of 4 824 adults agreed to participate. Sexual orientation was assessed through self-identification as either predominantly heterosexual, homosexual, bisexual or don't know (Jorm et al., 2002). The homosexual and bisexual sample combined made up 2.7% of the sample of the young men between 20 and 24 years (1% homosexual, 1.7% bisexual), 4.5% of young women between 20-24 years (1.8% homosexual, 2.7% bisexual), 2.4% of middle-aged men between 40 and 44 years (1.6% homosexual, 0.8% bisexual) and 2.7% of middle-aged women between 40-44 years (2% homosexual, 0.7% bisexual)(Jorm et al., 2002).

There is a lack of data in South Africa about the mental health of gay and lesbian people. A very limited study has been conducted by Kruger & Morwamohube (2003) into the mental health issues faced by lesbian women in Mamelodi and Pretoria, in Tshwane. Mamelodi is an area that consists of predominantly black residents. Mamelodi is considered metropolitan but the residents are in general less resourced than residents from Pretoria. Pretoria is a racially mixed and a more resourced city in Gauteng. The results indicated that alcohol abuse was more prevalent in the Mamelodi group than in the town group. It is suspected that

there is a link between socio-economic status, age and alcohol abuse, all of which were more pronounced in the Mamelodi group (Kruger & Morwamohube, 2003).

In the general population, the relationship between stress, negative life events and depression is well documented (Hughes & Eliason, 2002). Amongst women it has been found that, with clinical as well as with general population studies, there is a strong relationship between depression and alcohol abuse (Hughes & Eliason, 2002). This link is not so strong amongst men (Hughes & Eliason, 2002). The link between depression and alcohol abuse is reciprocal, in that depression can be both a cause and a consequence of alcohol abuse (Hughes & Eliason, 2002).

There is no reason to believe that gay men and lesbian women will react differently to the general population when faced with stress. However, one could aver that gay men and lesbian women are faced with more stress than the general population because of the social stigma associated with having a minority sexual orientation. Cochran, Mays & Sullivan (2003) found that gay men and lesbian women had a higher prevalence of mood, anxiety and substance use disorders when compared with heterosexuals of the same sex.

Diamond and Wilsnack (cited in Anderson, 1996) conducted research with 10 lesbian alcohol abusers. They found that all of them had a high incidence of depression suggesting a link between depression and alcohol abuse. Similarly, in a survey conducted by McKirnan and Peterson (cited in Anderson, 1996) amongst 3 400 gay men and lesbian women, they found that the participants, who reported more negative affectivity, including depression, were more likely to abuse alcohol to reduce tension. This correlation between stress-related alcohol abuse was strong amongst both gay men and lesbian women, just as it is amongst the heterosexual population (Anderson, 1996). The link between negative affectivity and marijuana use, cocaine use, and other drug problems was consistent but low (Anderson, 1996).

In contrast with these studies, there have been other studies in which the link between stress, depression and alcohol abuse is less clear (Hughes & Eliason, 2002). Hughes and Eliason (2002) found that drinking and using drugs as a result of stress was significantly related to perceived stress amongst the heterosexual women in the sample but not amongst the lesbian women. These contradictions are a reminder of the multi-faceted nature of both depression and substance abuse.

It is hypothesised that alcohol and drug use have an impact on vulnerability to depression, with frequent alcohol or drug use resulting in increased vulnerability to depression.

In conclusion of the literature review, it is apparent that there could be various risk factors for depression among gay men and lesbian women in South Africa. The most consistently reported risk factors associated with depression among gay men and lesbian women are self-esteem, social support, self-disclosure of one's sexual orientation, victimisation and alcohol and drug use.

The following hypotheses were formulated based on findings from past research even though it is recognised that the situation in South Africa is unique and this study is essentially exploratory.

2.3 HYPOTHESES

2.3.1 There is a significant negative correlation between vulnerability to depression and self-esteem among adult gay men and lesbian women in the sample.

2.3.2 There is a significant negative correlation between vulnerability to depression and social integration among adult gay men and lesbian women in the sample.

2.3.3 There is a significant positive correlation between vulnerability to depression

and alcohol use among adult gay men and lesbian women in the sample.

2.3.4 There is a significant positive correlation between vulnerability to depression and drug use among adult gay men and lesbian women in the sample.

2.3.5 There is a significant positive correlation between vulnerability to depression and perceived victimisation among adult gay men and lesbian women in the sample.

2.3.6 There is a significant positive correlation between vulnerability to depression and fear of victimisation among gay men and lesbian women in the sample.

2.3.7 Self-esteem, social integration, perceived victimisation and alcohol and drug use are significant risk factors for vulnerability to depression among gay men and lesbian women in the sample.

The validity of these hypotheses will be assessed using data from a sample of gay men and lesbian women in Gauteng, South Africa. The research design and methodology employed in order to conduct the research will be covered in the following chapter.

Chapter 3

METHODOLOGY

The previous chapter discussed the challenges researchers experience with regards to obtaining representative LGBT samples and the lack of standard LGBT definitions. A summary of the LGBT research conducted in South Africa and internationally was also outlined. This led to the formulation of hypotheses which the current research addresses. The following chapter will outline the research methodology employed. This will include the details pertaining to questionnaire development, sampling, ethical considerations, data capturing, data cleaning and data analysis.

3.1 INSTRUMENT

3.1.1 Questionnaire development

The questionnaire was developed to address the objectives for the research as outlined by the JWG. It was designed after having conducted exploratory interviews with key members of Behind the Mask, Equality Project, Gay and Lesbian Archives, the Unisa Centre for Applied Psychology and OUT. After designing the questionnaire, it was distributed to the members of the JWG for input, as well as to key members of the OUT Board (including the research supervisor). All input was evaluated and necessary changes integrated. This process took place over a period of two months. Once finalised and approved by the JWG, the questionnaire was piloted. Twelve pilots were conducted, including one respondent from each main sampling cluster (see Section 3.3.1). Any queries and problems were evaluated and changes incorporated.

3.1.2 Questionnaire

The final questionnaire comprised fourteen pages (see appendix A). Instructions on how to complete the questionnaire and assurances of anonymity and confidentiality were given in writing on the first page. The purpose of the research was also explained under this section.

Socio-demographic questions relating to sex, gender role, sexual orientation, age, race, home language, province of residence, specific area of residence, employment status, job type, income, educational level and relationship status were on the first three pages of the questionnaire.

The questionnaire was designed to cover a wider domain than that which is covered in this dissertation, thus the remainder of the questionnaire contained items measuring level of disclosure of sexual orientation, social integration into LGBT communities, victimisation experienced and fear of victimisation, experience of the police and criminal justice system, health service satisfaction, health status, substance use, self-esteem, indicators of depression and political and religious interests.

The questionnaire did not include any existing standardised scales but some items were obtained from other sources, such as the items related to social integration, which were adapted from those used by Berger (1982). The self-esteem scale included items from Rosenberg's Self-Esteem Scale (1965) and the victimisation section contained several items adapted from a police survey of violence and harassment against gay men and lesbian women in New South Wales, Australia (Sandroussi & Thompson, 1995). The depression scale included some items adapted from Berger (1982). Calculations of the Cronbach's Alphas were performed to determine the reliability of the scales and factor analyses were conducted to investigate internal validity (see section 3.5.1).

The format of the questionnaire was such that the items were mostly closed questions, and the participants simply had to circle the relevant responses. There were open-ended questions but none that involved in-depth responses.

The online questionnaire was designed using Macromedia Dreamweaver MX (Dreamweaver, 2004). In order to send the codes from the responses directly to a database, Active Server Pages (ASP) were utilised. Before the questionnaire went 'live', it was tested thoroughly and responses checked against what was transferred to the database.

In the next section, the measurements for the variables used in the research for this dissertation are discussed in more detail. Please refer to the questionnaire in Appendix A to view items discussed.

3.1.2.1 Vulnerability to depression

The purpose of the depression scale was to provide an indication of vulnerability to depression. It must be noted that this is an indicator of depression, not a measure of depression.

Items 52a to 52e were used to measure vulnerability to depression. Responses were scored on a 4-point scale from 'Never' (scored 1) to 'Always' (scored 4) indicating the frequency of having experienced various somatic symptoms such as headaches, insomnia or trouble staying awake, increased or decreased appetite and difficulty getting up in the morning. The frequency of having thoughts of suicide was also measured. Higher scores indicated an increased vulnerability to depression.

3.1.2.2 Self-esteem

Items 51a to 51g were used to measure self-esteem. These do not form a

standardised scale. The scale included items adapted from Rosenberg's Self-Esteem Scale (1965). Responses were scored on a 5-point scale from 'Strongly Disagree' (scored 1) to 'Strongly Agree' (scored 5). Negatively phrased questions were reverse-coded. Higher scores indicated higher self-esteem. Items 51c, 'I am in control of my life' and 51g, 'I feel like I have a lot to be proud of' were excluded from the scale after an examination of the reliability analysis and factor analysis. This will be discussed in chapter 4, Section 4.1.2 in more detail. All the items in the scale were negatively phrased except for 51c and 51g, thus it may have resulted in participants rating incorrectly due to misunderstanding that agreement was now associated with the positive rather than the negative.

3.1.2.3 Social integration

Social integration into LGBT communities included items relating to disclosure of one's sexual orientation to family, friends and the community as well as items relating to socialising within LGBT communities.

Disclosure of sexual orientation was measured by items 15a, b and d. The scale used was a four-point scale ranging from 'None' (scored 1) to 'All' (scored 4) in response to, for example, the statement 'I am out (open about my sexual orientation) to my family'. Higher scores indicated a higher level of disclosure.

Disclosure to work colleagues was excluded from the analysis as this could not be rated by students or the unemployed. If this item was included it would have resulted in a lot of missing data, which would have impacted negatively on the factor analyses and regression analysis.

Socialisation in LGBT communities was measured using items 16 to 18, 19a, d and f. Item 16 investigated how well one was known among LGBT people, using a five-point scale from 'Not really known' (scored 1) to 'Very popular socially' (scored 5). Items 17 and 18 related to how many current friends were LGBT and what

portion of leisure time is spent socialising with LGBT friends. The five-point scale ranged from ‘All’ (scored 1) to ‘None’ (scored 5). This scale was reverse-coded before analysis. Items 19a, d and f related to frequency of socialising in LGBT bars and clubs, LGBT events (film festival, Pride Parade, etc.) and the homes of other LGBT people. This was rated on a four-point scale ranging from ‘Never’ (scored 1) to ‘Often’ (scored 4). Higher scores for all these items indicated a higher level of integration into LGBT communities which was used as an indication of social support.

Additional items from the questionnaire regarding socialisation at LGBT restaurants, religious organisations and social clubs were not included in the scale due to these venues being primarily available in resourced areas. Under-resourced gay men and lesbian women would not necessarily have access to these venues. Including these items could have biased the results.

3.1.2.4 Victimisation

Measures of victimisation included fear of victimisation, victimisation experienced at school and victimisation experienced in the past 24 months. All these aspects included items relating to verbal, physical and sexual abuse.

Fear of victimisation was measured by 23a, b and c rated on a four-point scale ranging from ‘Not Afraid’ (scored 1) to ‘Very Afraid’ (scored 4). Higher scores indicated a greater fear of victimisation.

Victimisation experienced at school comprised items 24a, b, c and d that were rated on a four-point scale. The scale ranged from ‘Never’ (scored 1) to ‘Most of the time’ (scored 4). Higher scores indicated a higher frequency of victimisation experienced at school.

Items 27a, b and c measured victimisation experienced during the past 24 months.

The scale was a four-point scale ranging from ‘Never’ (scored 1) to ‘More than ten times’ (scored 4). Higher scores indicated a greater frequency of victimisation experienced.

Items relating to domestic violence and attacks on property were not included as part of the analyses as these aspects do not exclusively measure homophobic victimisation and could have biased the results. Domestic violence includes abuse from a partner and attacks on property can also be unrelated to homophobic attacks.

3.1.2.5 Alcohol and drug use

Alcohol use was measured though items 45-46. Item 45 covered perceptions of oneself as a ‘Teetotaller’ (scored 1), ‘Alcohol User’ (scored 2), ‘Alcohol Abuser’ (scored 3) or ‘Alcoholic’ (scored 4). Item 46 and 47 investigated the frequency of alcohol use and the frequency of being inebriated, rated on a five-point scale ranging from ‘Never’ (scored 1) to ‘Every day’ (scored 5). Higher scores provided an indication of greater alcohol use.

Recreational drug use was measured through items 48 and 50. Item 48 measured frequency of drug use and was rated on a five-point scale ranging from ‘Never’ (scored 1) to ‘Every day’ (scored 5). Item 50 measured perceptions of oneself as someone who ‘Does not take drugs’ (scored 1), ‘Uses drugs’ (scored 2), ‘Abuses drugs’ (scored 3) or ‘Is dependent on drugs’ (scored 4). Higher scores indicated higher drug use.

3.2 ETHICAL CONSIDERATIONS

Due to the sensitive nature of the research, the ethics of the research had to be thoroughly examined. This was considered in depth before the research began. The ethics involved are outlined in the following sections.

3.2.1 Professional competence

In the research process, practice was limited to research only. In the event that a participant engaged in a way that indicated a need for counselling or advice, the participant was referred to an appropriate source. A resource list of LGBT-friendly service providers in Gauteng was given to all the participants, including phone numbers and addresses for legal advice, help-lines and support groups.

Various methods of data collection were used in the research, which included self-completion through group administration, as well as individual completion through snowball sampling (see section 3.3). In addition, the questionnaire was available online for self-completion. In the situations where fieldworkers were used for the administration of questionnaires, the researcher made sure that the fieldworkers were competent and well-trained. The researcher trained the fieldworkers on the background and objectives of the research as well as the importance of confidentiality. All fieldworkers completed the questionnaire themselves as part of the training and every question was discussed, with particular emphasis on the filter questions and the flow of the questionnaire.

Multiple relationships with the participants were limited where possible. This was achieved through group administration. However, snowball sampling was used and in these cases participants did pass the questionnaires on to their friends or colleagues. Fieldworkers were informed not to engage with the participants in an inappropriately personal manner and to refrain from giving advice or counselling. The fieldworkers were given a resource list to hand out to all participants. Standard instructions were used by all the fieldworkers.

When interpreters were used for participants who were not fluent in English, the researcher ensured that the interpreters were fluent in English as well as in IsiZulu and in Sesotho, which were the languages that needed translation. Qualified interpreters were not obtained due to budget limitations. The interpreters were

trained and briefed not to prompt participants to give particular responses.

3.2.2 Professional relations

When the questionnaire was administered to a group by the researcher or to individuals by fieldworkers, the researcher ensured that the participants were informed about the purpose of the research and what amount of time was required of them. All participants were informed that participation was voluntary, they could withdraw from the research at any point and they did not have to answer any questions that they did not feel comfortable with. The importance of honest responses was stressed and encouraged. After explaining the intentions of the research, participants were given the chance to ask questions and receive answers. In the case of the on-line questionnaire and snowballing, a contact number was provided for participants to ask questions. Assurances of anonymity and confidentiality were also given in writing on the first page of the questionnaire, and the background and purpose of the research were also provided. In the cases of group administration, participants were asked to fold the questionnaire and put it inside a box once completed. The box had a slit in the top where the questionnaire could be pushed through. This helped to ensure anonymity. With individual snowball sampling, the questionnaires were placed in envelopes, sealed, and posted or returned to an agreed point of contact.

Participants differed with regards to cultural background, religion, socio-economic status, sex, gender role, age and language. There was no discrimination because of these diversities and no values, attitudes, beliefs and opinions were imposed on the participants by the researcher or the fieldworkers.

The participants' informed consent was obtained verbally, not in writing. The reason for this is that the topic of sexuality is an extremely sensitive one and the identities of the participants needed to be protected. A letter of consent could have threatened the anonymity of the participants even when not linked to their

questionnaires.

Any person who was incapable of participating in their full capacity was not asked to complete the questionnaire, such as individuals who were inebriated, under the influence of drugs or mentally impaired. At the Pride Parade (see section 3.3.2) alcohol was being consumed by many supporters of the parade, and thus fieldworkers had to be very attentive so as not to ask inebriated individuals to participate. Similarly, when recruiting from support groups, only persons who were fully functional in terms of mental capacity were asked to participate in the research.

Extra caution was taken not to include individuals under the age of sixteen years. The reason for this is that children under the age of sixteen require parental consent to participate in any research study. Gay and lesbian adolescents of these ages would most likely have not revealed their sexual orientation to their parents. Special care was taken to ensure that adolescents of sixteen years and older understood what the details of the research were and what was required of them.

The researcher and fieldworkers were on most occasions appropriately dressed. No untidy, dirty or revealing clothing was worn during contact with participants. The only occasions which deviated from this standard were at the Pride Parade and during a costume party at Mamelodi (see section 3.3.2), where some fieldworkers wore ‘drag’. However this was not inappropriate considering the context, in which this was an acceptable form of attire.

Incentives in the form of transport money and / or refreshments were provided to under-resourced participants in order to prevent their incurring expenses due to partaking in the research. Incentives were managed by the researcher to ensure that they were not excessive, which could result in people who were not part of the target groups completing the questionnaire purely to receive the incentive.

3.2.3 Privacy, confidentiality and records

Although the questionnaires were anonymous, they were stored in a place that only the researcher had access to. This ensured the privacy and confidentiality of the records. In the event that other persons would need to see the questionnaires (e.g. data capturers, supervisor or co-supervisor), they were told to keep the questionnaires in a place that was accessible only to them. Similarly, the database of raw data for analysis was password-protected to prevent tampering and unauthorised access.

No results were discussed with any persons other than the researcher's supervisor, co-supervisor, and the JWG until the final analyses had been completed. Due to the sensitive nature of the topic, if results had been disseminated prior to being finalised, negative consequences toward the gay and lesbian population could have resulted. Results were only disseminated with proper explanations and interpretation, and with specific reference to the limitations of the study. The possible sources of dissemination were revealed to the participants before they completed the questionnaire. Participants were also given a contact number to find out about the results of the research should they be interested.

The results were disseminated with an interpretation that did not pathologise gay and lesbian sexuality. No results were used to classify gay men and lesbian women into one or more medical categories.

3.3 SAMPLING

3.3.1 Sample design

Due to the heterogeneity of the gay and lesbian population in South Africa, it was necessary to stratify the sample to be representative in terms of variables such as

age, race, sex and socio-economic status. This would allow for the results to be used to inform programmes and interventions addressing the needs of gay men and lesbian women in metropolitan Gauteng.

Anecdotal evidence (OUT) indicates that gay men and lesbian women differ in terms of their experiences of being part of a marginalised minority. Lesbian women are not only marginalised as a result of their same-sex sexual orientation, but are also living in a society which is still largely dominated by men (Nel, 2005a). Lesbian women, in general, form a silent and invisible minority that have been excluded from most research in South Africa in the LGBT communities, which has focused predominantly on white gay men (Reid & Dirsuweit, 2002; Berman, 1993; Potgieter, 2005). Thus it was important to include a substantial portion of lesbian women in this research.

Age was an important distinguishing variable as young gay men and lesbian women have grown up in a time when they have laws protecting their rights even though they are still part of a marginalised group. Young gay men and lesbian women may feel isolated due to not having developed any, or sufficient, support networks. Homophobia may be internalised which can impact negatively on well-being (Lesbon, 2002; Schneider, Fareberow & Kruks, 1989). Older gay men and lesbian women could also lack support and may not have disclosed their sexual orientation due to growing up in an era in which homosexuality was criminalised. Ensuring representation in the sample of both younger (16 to 24 years) and older (25 to 40 years) gay men and lesbian women was essential to understanding the needs and experiences of both these groups. Gay men and lesbian women over 40 years were not specifically targeted for the research based on the objectives of the overall project outlined by the JWG. At the time of the research, interventions and programmes to specifically address the needs of gay men and lesbian women over 40 years was not part of the strategy.

Attitudes towards gay and lesbian behaviour differ among race groups, with

homosexuality often seen as ‘un-African’ by many black people in South Africa (Hoad, 1999; Reid & Dirsuweit, 2002). Research has generally excluded or under-represented black gay men and lesbian women. Including a sufficient sample of black gay men and lesbian women was important to address the paucity of research regarding their experiences and needs.

In the South African context, race is inextricably linked to the level of resources one has access to. Due to the impact of apartheid, black gay men and lesbian women have less access to the resources that are more readily available to white gay men and lesbian women. Limited access to LGBT service providers and social spaces can result in isolation and can have a negative impact on well-being.

To ensure representation of all of these variables, a convenience sample of gay men and lesbian women were selected through a purposive quota sampling technique in which twelve key clusters were identified. The aim was to acquire at least thirty participants for each cluster to allow for analysis at a cluster level (see Table 3.1). Analysis at a cluster level was conducted for the overall research project but not for this dissertation. For dissertation purposes analyses were conducted at an overall level and respondent weights were assigned based on age, race and sex to allow for a representative sample in terms of these variables (see Appendix B for an explanation of weights). These weights were calculated using the 2001 South African Census Data (Statistics South Africa, 2004).

Socio-economic status was broadly assessed through the level of resources the participants had access to. This was measured by area of residence. Township areas were classified as being under-resourced areas and other metropolitan areas were classified as resourced areas. From the experiences of the JWG, several of which have programmes operating in townships, there are very few or no resources in these areas for gay men and lesbian women. Social spaces are scarce or non-existent. As a result it is anticipated that the needs and experiences of individuals residing in a township context could be different to the needs and

experiences of individuals living in metropolitan areas. Considering that townships consist of mostly black residents, the sample of white participants did not include under-resourced groups. Although the sample technique ensured the inclusion of participants from both resourced and under-resourced areas, this variable was ultimately excluded from analysis due to large amounts of missing data from the area of residence question.

Table 3.1: Sample plan for clusters

	Black		**White**
	Resourced	Under-resourced	Resourced
Male			
16-24 years	30	30	30
25-40 years	30	30	30
Female			
16-24 years	30	30	30
25-40 years	30	30	30

Participants were identified through:

- Gauteng-based LGBT organisations, namely, OUT, Equality Project, Behind the Mask (BTM), Forum for the Empowerment of Women (FEW), The Gay and Lesbian Archives (GALA) and Activate.
- support groups and counselling centres.
- the annual gay and lesbian Pride Parade.
- online questionnaire on the OUT website as well as a link from mambaonline (LGBT website) to the OUT website.
- friendship networks (snowballing).

Three different sampling techniques were used:

- group administration of the questionnaire.
- snowball sampling through LGBT individuals.
- online questionnaire completion.

3.3.2 Source of participants

Sampling began at the annual Gay Pride Parade on the 27th of September 2003. After the parade in the streets, participants returned to Zoo Lake in Johannesburg for celebrations. It was during this time that gay men and lesbian women were approached by the fieldworkers to complete the questionnaire. Thirteen fieldworkers were trained on how to administer the questionnaires. The fieldworkers included LGBT university students and volunteer workers for OUT. The researcher was present to supervise the fieldwork. Incentives were offered to participants in the form of a free drink and a resource pack. The resource pack included a carry-bag which contained condoms (for gay men) / latex gloves (for lesbian women), lubrication, newsletters and a resource list of contact numbers for legal advice, help lines and support groups.

Fieldworkers were briefed to target black and white lesbian women, of all ages, as this was a more difficult target group than black and white gay men. Black gay men could easily be sampled through LGBT organisations and white men through the online questionnaire and support groups. Lesbian women were more difficult to reach and as such we began sampling by targeting them at the Pride Parade where there was a fair chance of finding lesbian women. However, men who asked to complete the questionnaire were also sampled. Instructions were given verbally to the participants, and assurances of anonymity and confidentiality were provided. Flyers with information about the research and the address of the online questionnaire were distributed at the Pride Parade. It was hoped that this information would be passed on to gay and lesbian friends who could contact the researcher to participate or complete the questionnaire online. At the Pride Parade 175 questionnaires were completed, of which 45 were unusable. This 26% that were unusable were incomplete questionnaires. Fieldworkers did report that some participants thought that the questionnaire was too long and wanted to finish quickly and returned to the excitement of the events. This resulted in some partially completed questionnaires. The majority of the participants took the

questionnaire seriously and completed it accurately. After data cleaning, 82 questionnaires were retained for use in the final dataset. Details of the data cleaning procedure will be discussed in more detail under section 3.4. After the Pride Parade the numbers of questionnaires falling into each cluster were noted and plans to fill the remaining clusters made.

In order to sample black, under-resourced gay men and lesbian women from 16-24 years, a fun day was arranged in Mamelodi (a predominantly black township area in Tshwane). OUT has an office in Mamelodi where community work is conducted for the benefit of gay men and lesbian women. Several volunteer workers for OUT handed out flyers to gay men and lesbian women in which they were invited to participate in the research. Twenty-two participants were willing to participate. Twenty of the questionnaires were used after data cleaning. Transport money was provided and the fun day was offered as an incentive after the completion of the questionnaire. The fun day included refreshments, music and a costume party at the Mamelodi community hall.

Activate, which is an LGBT student organisation at the University of the Witwatersrand, agreed to participate in the research. At the time of the fieldwork, they had a membership of close to 60, with the majority of their members being black, resourced and within the ages 16 to 24 years. It was arranged that the questionnaires be completed by willing participants on a day when the organisation had a meeting. An incentive of R10 per completed questionnaire was offered. In addition, three of the members of the organisation, who were also used as fieldworkers during the Pride Parade, agreed to take questionnaires to administer to friends outside of the university in other predominantly black areas such as Soweto. Details of the numbers of participants still needed in each cluster were provided to the fieldworkers to ensure the required spread. However, if somebody asked to participate who was not of the required profile, they were not refused participation. After data cleaning, 75 questionnaires were retained.

Organisations that were part of the JWG were asked to help recruit participants. Questionnaires were left at BTM in Braamfontein, Johannesburg, which is an organisation that develops media around LGBT issues, in particular an LGBT website with an African continent focus. After data cleaning seven of these questionnaires were used, all of which included participants from the resourced, black groups. Three participants were obtained from the Equality Project[8] which does advocacy and lobbying and offers legal advice for LGBT individuals. One questionnaire was obtained from GALA, a national organisation based in Johannesburg. Questionnaires were also given to participants of the OUT support group which is hosted in Johannesburg. Seven of these were returned via mail. Questionnaires obtained from the Equality Project, GALA and the OUT support group comprised mainly of resourced white males.

FEW arranged for the questionnaire to be group-administered to its participants during their monthly meeting in Johannesburg. This sample included black women, resourced and under-resourced, of all ages. Instructions were given by the researcher to the group on how to complete the questionnaire. An interpreter was available to assist in instances where language was misunderstood. The interpreter was trained on instructions to ensure that understanding and interpretation was as per the intention of the researcher. The interpreter was also trained not to prompt participants. Refreshments were provided for participants at the monthly meeting. After data cleaning, 17 questionnaires were used from this source. Questionnaires were also given to a member of FEW who conducted workshops for lesbian women in predominantly black areas such as Alexandra. She administered these questionnaires to the women in these areas. Ten questionnaires were obtained in this way.

OUT volunteers who lived in Tshwane central arranged for a group of 12 black, under-resourced gay men and lesbian women to complete the questionnaire at the OUT offices. The questionnaire was group administered by the researcher to the

[8] The Equality Project closed down in 2005 but plans to re-launch in 2006 are underway.

participants. An interpreter was present to assist when necessary. Refreshments were provided as well as R20 transport money.

Similarly, 10 questionnaires were administered to gay men and lesbian women in Atteridgeville, where OUT conducts outreach work to gay and lesbian communities. Atteridgeville is a predominantly black township area. Transport money (R20) and refreshments were provided. This group was comprised of black, under-resourced gay men and lesbian women. Contact names of gay men and lesbian women in Shoshanguwe and Mabopane, also predominantly black township areas, were obtained through these participants. Using these contacts, two group sessions were arranged in Shoshanguwe and one in Mabopane.

In Shoshanguwe, a group of gay and lesbian students and scholars completed the questionnaire. Two sessions were arranged, each about two weeks apart. Eleven students attended each group session. The questionnaire was administered by the researcher to the group. Refreshments and R10 transport money were offered to the participants. The participants were black, aged 16-24 years and the majority were from under-resourced areas. Very few of these participants had revealed their sexual orientation to their family. Three of these students agreed to help with the administration of the questionnaire to a group of gay men and lesbian women in Mabopane. They were briefed on the instructions and how not to prompt participants. The researcher was present to oversee the group administration.

Mabopane is close to Shoshanguwe, so the research was conducted here after the second session in Shoshanguwe. The nine participants from Mabopane were black, under-resourced and mostly within the age group 24 to 40 years. The questionnaires were completed at a taxi rank in Mabopane where a room had been arranged for the research. The level of education of these participants was less than Grade 12 so it was necessary to help the participants quite actively in completing the questionnaire. The students from Shoshanguwe assisted in this regard. These participants took almost twice as long to complete the questionnaire

as previous participants had done because they read slower and their understanding of English was below average. Refreshments and R10 transport money were offered to the participants.

The last of the group sampling was conducted in Soweto. The Soweto HIV/AIDS Counselling and Advice Centre (SOHACA) arranged for a group of gay men and lesbian women to meet at their premises for the research. The researcher administered the questionnaire to the group. After data cleaning, seven of the questionnaires from this source were included in the final sample. Refreshments and R10 transport money were offered to the participants. The participants were black, under-resourced and fell into both the 16-24 years and the 24-40 years age-groups.

In addition to the group sampling that was conducted, questionnaires were given to various individuals to pass on to friends (snowballing). These questionnaires were completed, sealed in an envelope and returned to the individual from whom they were received. These were then collected at a later stage from the individuals who agreed to help with the research. A total of 97 questionnaires were obtained in this manner. Clusters which were short on sampling were targeted in this way. For example, we asked some white gay and lesbian students to help us to find white gay men and lesbian women in the age group 16-24 years, which was a difficult sample group to find.

The questionnaire was also placed on-line on the OUT website. The researcher asked mambaonline (http://www.mambaonline.com), which is a very popular LGBT website, to display a link to the questionnaire from their homepage. They agreed to do this for a 48-hour period on a Friday and a Saturday, which helped tremendously with exposure. After data cleaning, 108 questionnaires that had been completed on-line were retained. The majority of these questionnaires were completed by white males in the age group 25 to 40 years.

Table 3.2 shows a summary of the number of participants obtained from each source. Numbers are those retained after data cleaning and are unweighted.

Table 3.2: Number of participants (unweighted) obtained from each source

Source	Number of participants
Activate	75
Behind the Mask	7
Equality Project	3
FEW	27
GALA	1
OUT	12
OUT Support Group	7
OUT Website	108
Pride Parade	82
Snowballing groups • Shoshanguwe • Mamelodi • Attridgeville • Mabupane	61
Snowballing individuals	97
SOHACA	7
Total	**487**

3.3.3 Sample details

After excluding data from bisexual participants and those who were older than 40 years, the size of the total sample was 385. The cluster composition can be seen in Table 3.3. The table reflects both weighted and unweighted results (see Appendix B for details).

Table 3.3: Weighted and unweighted frequencies and percentages of participants in each cluster

Age	Race		Female	Male
16-24 years	Black	Number	61 / *69	67 / *63
		Percentage	15.8 / *17.8	17.4 / *16.4
	White	Number	22 / *20	25 / *19
		Percentage	5.7 / *5.2	6.5 / *4.9
25-40 years	Black	Number	54 / *76	45 / *68
		Percentage	14.0 / *19.8	11.7 / *17.7
	White	Number	28 / *22	60 / *20
		Percentage	7.3 / *5.6	15.6 / *5.3

*Weighted

Twenty-three participants (6.0%) had missing data on one of the three variables used for classification into the above clusters. This figure was 27 (7.1%) after weighting.

From this point forward all statistics will reflect weighted results.

Overall, 51.1% of the participants were lesbian women, 47.9% were gay men and 1.0% did not reveal their sex. The racial composition was 78.8% black and 21.2% white. The mean age was 25.3 years (SD=5.8). More than a third of the participants were students, which may have resulted in bias in the results. Unemployment among participants was 14.5% with students excluded. The home languages of participants are shown in Table 3.4 and the highest level of education achieved in Table 3.5.

Table 3.4: Frequencies and percentages of home languages

Language	Frequency	Percentage
IsiZulu	65	16.9
Setswana	64	16.7
English	54	14.1
Sesotho	44	11.5
Afrikaans	39	10.0
Pedi	34	8.9
Ndebele	23	6.1
IsiXhosa	21	5.4
Tsonga	15	4.0
SiSwati	12	3.2
Venda	9	2.3
Other	3	0.9
Total	385	100.0

Table 3.5: Frequencies and percentages of highest level of education achieved

Highest Level of Education	Frequency	Percentage
Less than Grade 12	61	15.8
Grade 12	89	23.0
Certificate	40	10.5
Diploma	83	21.6
Degree	38	9.8
Post-graduate Degree	12	3.2
Missing	62	16.1
Total	385	100.0

3. 4 DATA CAPTURING AND CLEANING

After fieldwork, questionnaires were captured and the database was ‘cleaned’. Questionnaires were manually examined to identify incomplete questionnaires, which were excluded. A questionnaire was considered incomplete if more than 25% of the questionnaire was incomplete.

The responses from the completed questionnaires were captured using an electronic questionnaire template in the same format as the on-line questionnaire. This was easier than capturing the codes into a database and helped to prevent errors, as data was transferred directly into an access database from the electronic questionnaire template.

After data capturing a 10% random check was conducted to see if responses in the database corresponded with the paper questionnaires. Once it was certain that the data capturing was accurate, data cleaning took place.

The original database consisted of data from 640 participants. This original, uncleaned dataset has been saved for reference.

Data from participants who were heterosexual were deleted from the dataset. Data were also deleted from participants who were not from Gauteng and those who were intersex. The numbers of Indian and coloured participants were minimal and not representative, so these responses were also deleted. Data from bisexual participants were included for the overall project research, but these participants were excluded from the research presented in this dissertation.

Data cleaning in terms of the routing (filter questions) of the questionnaire was conducted. Any responses to questions which should not have been answered were deleted or changed to ‘not applicable’, depending on the requirements of the questions.

If two responses were given for a single-response question, then the response was indicated as ‘missing’ as there was no way to determine which response was correct.

Any outliers were checked back with the questionnaire. Outliers were responses falling into the top 5% of the distribution. This was done with the questionnaires from participants who indicated an unusually high number of suicide attempts and those who knew a large number of people living with HIV. In all cases the outliers were confirmed with the paper questionnaire and retained.

Once the data cleaning was complete data analysis began. The following section will outline the data analysis conducted and provide a preview of the results to be presented in chapter 4.

3.5 DATA ANALYSIS

3.5.1 Reliability and validity of the scales

To investigate the reliability of the scales, Cronbach’s Alpha was calculated as a measure of internal consistency, as well as the corrected item-total correlations. Reliability coefficients of ≥ 0.70 were regarded as satisfactory based on Nunnally’s (1978) recommendation. This was determined for all scales to be used in the regression model, namely vulnerability to depression, self-esteem, social integration, victimisation and alcohol and drug use.

Factor analyses were conducted on all the scales separately using the maximum likelihood extraction method. Missing values were examined to determine whether mean substitution would be required for the factor analyses. When the factors were rotated, a varimax rotation was used. Factors with eigenvalues greater than one were examined to establish validity of the scales. Item communalities were calculated to give an indication of the shared variance among the variables and

the Kaiser-Meyer-Olkin Measure (KMO) was determined to provide an indication of whether a sufficient number of items were sampled to adequately measure the construct of each scale, that is whether they have enough in common to warrant a factor analysis. KMO takes values between 0 and 1, with small values indicating that overall the variables have too little in common to warrant a factor analysis. Heuristically, the following labels are often given to values of KMO (Stata, n.d.).

0.00 to 0.49	unacceptable
0.50 to 0.59	miserable
0.60 to 0.69	mediocre
0.70 to 0.79	middling
0.80 to 0.89	meritorious
0.90 to 1.00	marvellous

The results from these analyses were used to identify any items to be excluded from the scales for analysis purposes and to establish final composite variables to be used in the multiple regression modelling. The factor scores from each factor analysis were used as a composite measure of each scale. These results are reported in chapter 4, section 4.1.

After finalising the scales, a maximum likelihood factor analysis was conducted, which included all the final items used to measure the independent variables (social integration, self-esteem, victimisation, alcohol and drug use) and the items for the dependent variable (vulnerability to depression). A varimax rotation was used. The factor analysis was conducted to ensure that the scales were measuring distinct constructs.

3.5.2 Socio-demographic variables and depression

Pearson's product-moment correlations (one-tailed) were determined to identify significant relationships between vulnerability to depression and the composite variables, namely self-esteem, social integration, victimisation, alcohol and drug use. Results were used to verify or reject the hypotheses stated in chapter 2, section 2.3.

The relationship between age and vulnerability to depression was investigated using Pearson's product-moment correlation (two-tailed). Similarly, the correlation between educational status and vulnerability to depression was determined.

The independent sample student's t-test was used to identify any significant differences between the race groups, as well as between gay men and lesbian women with regards to mean vulnerability to depression scores.

3.5.3 Risk factors for depression

A multiple regression analysis was run to determine risk factors for depression (dependent variable). The independent variables were self-esteem, social integration, victimisation, alcohol and drug use.

This chapter has provided a description of the methodology employed in the research as well as a preview of what data analysis was conducted. The results of the analysis will be covered in detail in the following chapter.

Chapter 4

RESULTS

Chapter 3 discussed the methodology employed for this research. This chapter encompasses the results, which include the reliability and validity of the scales, socio-demographic differences in vulnerability to depression and the testing of the hypotheses outlined in chapter 2, section 2.3. This chapter concludes with the results and validation of the regression model for vulnerability to depression.

4.1 RELIABILITY AND VALIDITY OF THE SCALES

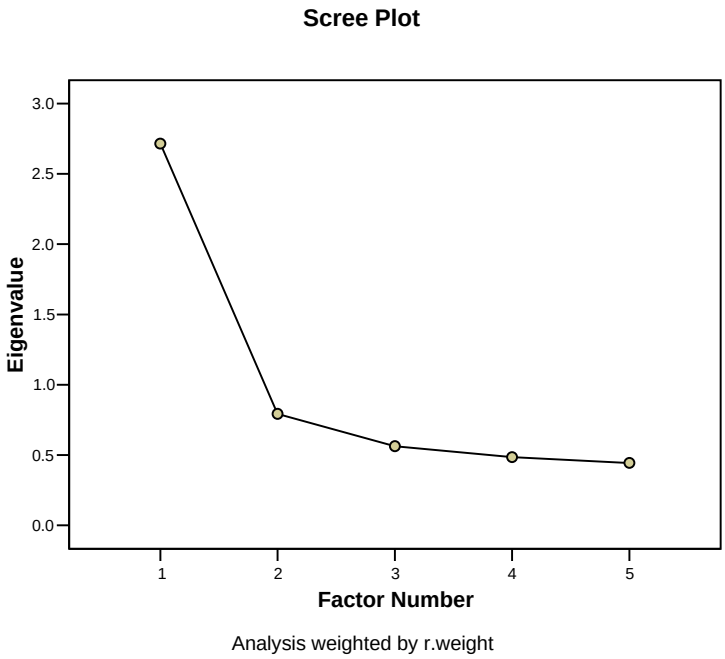
The scales to be assessed are vulnerability to depression, self-esteem, social integration, victimisation, and alcohol and drug use.

4.1.1 Vulnerability to depression

An unrotated[9] factor analysis was conducted on the scale used to measure vulnerability to depression. A factor analysis enables the detection of relationships between the attributes in the scale. The maximum likelihood extraction method was employed. Mean scores were substituted for the missing variables so as not to exclude data from participants who had not answered one or more of the items. Missing data was minimal, with less than 4% of the responses unanswered on all items. One dominant factor emerged with an eigenvalue of 2.72 accounting for 54.30% of the variance. All other factors had eigenvalues smaller than one, thus the scale was assumed to be measuring one construct. This was also apparent on examination of the scree plot (Graph 4.1) that shows that the curve flattens after the first factor.

[9] A rotated factor analysis could not be conducted as the scale comprised one factor. The purpose of rotation is to ensure that factors are not correlated with each other. In the case that only one factor emerges, rotation is unnecessary.

Graph 4.1: Scree plot from factor analysis of the Vulnerability to Depression Scale



The factor loadings and communalities of the items in the vulnerability to depression scale are shown in Table 4.1 below.

Table 4.1: Factor loadings and communalities for the Vulnerability to Depression Scale

Scale items	Factor loading	Communalities
52a. I think about committing suicide	0.45	0.18
52b. I have trouble getting to sleep or staying awake	0.64	0.33
52c. I get headaches or pains in the head	0.70	0.38
52d. I do not feel like eating or I eat too much	0.72	0.39
52e. I find it difficult to get up in the morning	0.75	0.43

The Cronbach's Alpha for the scale was 0.79, demonstrating a reliable scale with high internal consistency. The Kaiser-Meyer-Olkin Measure (KMO) was 0.82, indicating a meritorious level of sampling adequacy.

The item-total correlations ranged from 0.41 to 0.66. These can be seen in Table 4.2, with the Cronbach's Alpha for the scale if the item is deleted.

Table 4.2: Corrected item-total correlations and Cronbach's Alpha if item deleted for the Vulnerability for Depression Scale

Scale items	Corrected item-total correlations	Cronbach's Alpha if item deleted
52a. I think about committing suicide	0.41	0.80
52b. I have trouble getting to sleep or staying awake	0.58	0.75
52c. I get headaches or pains in the head	0.61	0.74
52d. I do not feel like eating or I eat too much	0.62	0.74
52e. I find it difficult to get up in the morning	0.66	0.73

Item 52a 'I think about committing suicide' had a low factor loading (0.45) and communality (0.18). This item also had a low item-total correlation (0.41) and the Cronbach's Alpha increased marginally if deleted. Thus this item was considered for exclusion from the scale. However, after consideration, this item was retained as it provides a unique contribution to the scale. Items 52b to 52e relate to psychosomatic symptoms of depression which without item 52a could also be symptoms of other psychiatric disorders and physical illnesses. For example, people with a severe gasto-intestinal infection could be experiencing all the psychosomatic symptoms and yet not be depressed. However, item 52a is specific to depression.

4.1.2 Self-esteem

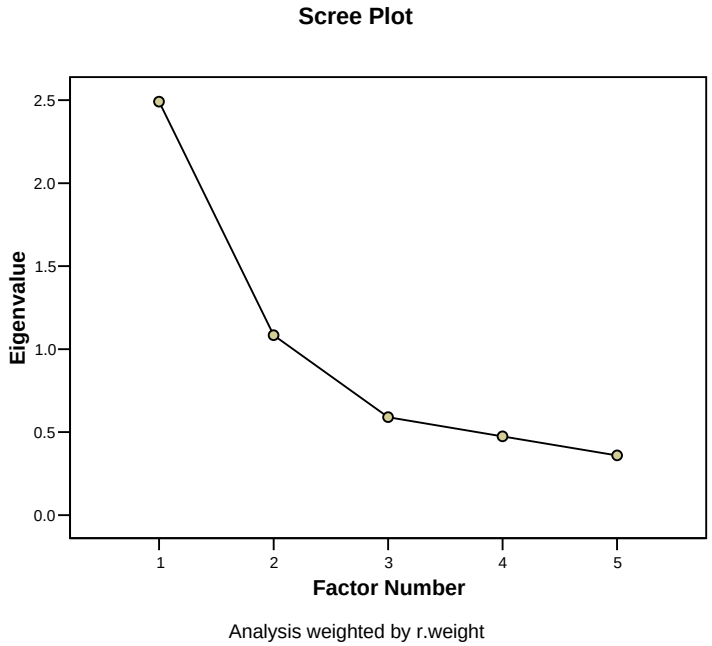
After initial factor and reliability analysis, items 51c 'I am in control of my life' and 51g 'I feel like I have a lot to be proud of' were excluded from the measure of self-esteem. Both these items had very low communalities (0.18 and 0.20 respectively) and item-total correlations (0.34 and 0.37 respectively). They were also loading separately on a third factor. Cronbach's Alpha was not affected negatively through

their deletion. Results reported from this point forward exclude these items.

A factor analysis was conducted on the self-esteem scale using the maximum likelihood extraction method with a varimax rotation. Means were substituted for the missing variables so as not to exclude data from participants who had not answered one or more of the items. Missing data was minimal, with less than 6% responses unanswered on all items.

Two factors emerged with eigenvalues of 2.49 and 1.08 respectively. The factors accounted for 71.50% of the variance, of which 49.82% was from the first factor and 21.68% from the second factor. The scree plot (Graph 4.2) shows that the curve starts to flatten after the second factor.

Graph 4.2: Scree plot from factor analysis of the Self-Esteem Scale (excluding 51c & g)



The factor loadings and communalities for the items in the self-esteem scale are shown in Table 4.3.

Table 4.3: Factor loadings and communalities for the Self-Esteem Scale (excluding 51c & g)

Scale items	Factor loading		Communalities
	1	2	
51a. I feel like I have to live two lives	0.08	**0.80**	0.36
51b. I feel like I do not belong	0.39	**0.70**	0.47
51d. I often feel rejected	**0.56**	0.28	0.30
51e. I feel useless at times	**0.77**	0.04	0.33
51f. I am not as happy as others seem to be	**0.63**	0.23	0.34

Note: The highest loading for each attribute is indicated in bold.

Factor 1 relates to self-regard and Factor 2 to alienation. Thus the measure of self-esteem was split into these two elements and two composite variables using the factor scores were created.

The KMO was 0.70, indicating a middling level of sampling adequacy. The Cronbach's Alpha for the scale was 0.75, indicating a reliable scale with adequate internal consistency. The Cronbach's Alphas for the subscales alienation and self-regard were 0.74 and 0.72 respectively. The item-total correlations for the self-regard subscale and the Cronbach's Alpha for the scale if an item is deleted are shown in Table 4.4. The alienation subscale contained two items; thus the Cronbach's Alpha if an item is deleted could not be calculated due to only one item remaining. The item-total correlation for both items was 0.59.

Table 4.4: Corrected item-total correlations and Cronbach's Alpha if item deleted for Self-Regard Subscale

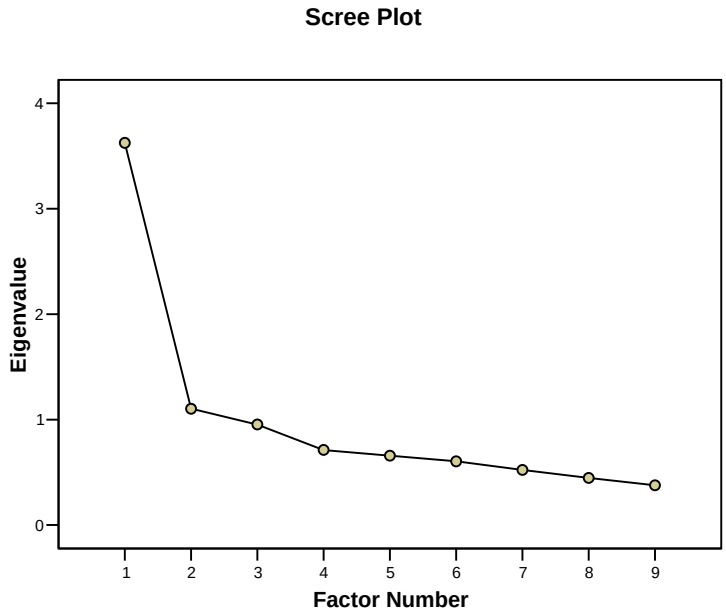
Subscale items	Corrected item-total correlations	Cronbach's Alpha if item deleted
51d. I often feel rejected	0.51	0.68
51e. I feel useless at times	0.57	0.60
51f. I am not as happy as others seem to be	0.55	0.62

4.1.3 Social integration

A factor analysis using the maximum likelihood extraction method was conducted on all items measuring social integration. A varimax rotation was used. Once again, mean-substitution was used for missing data. Missing data was less than 9% for all items.

Two factors emerged with eigenvalues of 3.62 and 1.10 respectively. The factors accounted for 52.52% of the variance, of which 40.27% was from the first factor and 12.25% from the second factor. The scree plot is shown in Graph 4.3. The factor loadings and communalities of the items can be seen in Table 4.5.

Graph 4.3: Scree plot from factor analysis of the social integration items



Analysis weighted by r.weight

Table 4.5: Factor loadings and communalities for the social integration items

Scale items	Factor loading		Communalities
	1	2	
15. I am out (open about my sexual orientation to…)			
15a. my family	**0.70**	0.31	0.47
15b. my friends	**0.63**	0.34	0.43
15d. other members of my community	**0.74**	0.14	0.39
*16. Integration with other LGBT people	**0.43**	0.34	0.27
*17. Current portion of LGBT friends	0.28	**0.47**	0.31
*18. Leisure time spent with LGBT people	0.18	**0.55**	0.31
19. How frequently do you socialise at…?			
19a. LGBT bars and clubs	0.28	**0.52**	0.29
19d. LGBT events (film festival, Pride Parade etc.)	0.11	**0.55**	0.23
19f. the homes of other LGBT friends	0.26	**0.49**	0.25

*Not actual questionnaire wording. Refer to appendix A. Note: The highest loading for each attribute is indicated in bold.

Factor 1 appears to measure disclosure of sexual orientation. Item 16, originally included for the socialisation within LGBT communities aspect of social integration, loads on both factors but is stronger with the disclosure items. This makes sense as the more one is open about one's sexual orientation the more one is likely to be known among LGBT people. Factor 2 seems to be a measure of the socialising aspect of social integration with all items relating to socialisation within LGBT communities. Thus social integration is made up of two aspects, disclosure of sexual orientation and socialising within LGBT communities. Composite variables were calculated for each of these aspects using factor scores.

The KMO was 0.84, which indicated that sufficient items were sampled to adequately measure social integration.

The Cronbach's Alpha for the scale was 0.81, indicating a reliable scale with high internal consistency. The subscales disclosure of sexual orientation and socialisation within LGBT communities had Cronbach's Alphas of 0.78 and 0.70

respectively.

Although items 16, 19a, d and f had communalities less than 0.30, these items were retained as deleting them would not increase the Cronbach's Alpha and their item-total correlations were acceptable when compared to the other items. The item-total correlations for the subscales and the Cronbach's Alphas for the subscales if an item is deleted are shown in Table 4.6.

Table 4.6: Corrected item-total correlations and Cronbach's Alpha if item deleted for the social integration items

Subscale items	Corrected item-total correlations	Cronbach's Alpha if item deleted
Disclosure of sexual orientation subscale		
15. I am out (open about my sexual orientation to…)		
15a. my family	0.64	0.71
15b. my friends	0.66	0.71
15d. other members of my community	0.62	0.72
*16. Integration with other LGBT people	0.48	0.79
Socialising within LGBT communities subscale		
*17. Current portion of LGBT friends	0.41	0.67
*18. Leisure time spent with LGBT people	0.49	0.64
19. How frequently do you socialise at…?		
19a. LGBT bars and clubs	0.47	0.64
19d. LGBT events (film festival, Pride Parade, etc.)	0.45	0.65
19f. the homes of other LGBT friends	0.46	0.65

*Not actual questionnaire wording. Refer to appendix A.

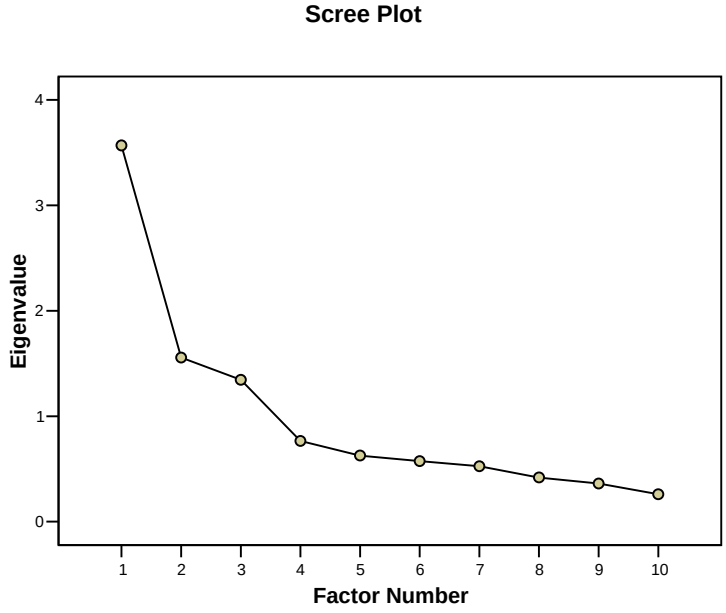
4.1.4 Victimisation

A factor analysis using the maximum likelihood extraction method was conducted including all items measuring fear of victimisation, experience of victimisation at

school and victimisation experienced over the past 24 months. A varimax rotation was used. Mean-substitution was used for missing data. Missing data was less than 8% for all items.

Three distinct factors emerged. The first factor related to fear of victimisation. It had an eigenvalue of 3.57 and accounted for 35.68% of the variance. The second factor represented physical victimisation as all attributes related to physical and sexual abuse experienced at school and over the past 24 months loaded strongly on this factor. It had an eigenvalue of 1.56 and accounted for 15.56% of the variance. The third factor, which had an eigenvalue of 1.35 and accounted for 13.45% of the variance, related to hate speech. In total, all three factors accounted for 64.69% of the variance. The factor scores from these factors were used to calculate composite variables to measure fear of victimisation, physical victimisation and hate speech. The scree plot is shown in Graph 4.4. The factor loadings and communalities of the items can be seen in Table 4.7.

Graph 4.4: Scree plot from factor analysis of the victimisation items



Analysis weighted by r.weight

Table 4.7: Factor loadings and communalities for the victimisation items

Scale items	Factor loading			Communalities
	1	2	3	
23. Fear of victimisation				
23a. Verbal abuse / harassment	**0.52**	0.26	0.10	0.35
23b. Physical abuse / assault	**0.99**	0.08	0.10	0.60
23c. Sexual abuse / rape	**0.68**	0.12	0.12	0.50
24. Victimisation at school				
24a. Verbal abuse / harassment	0.16	0.14	**0.80**	0.45
24b. Physical abuse / assault	0.18	**0.53**	0.50	0.47
24c. Sexual abuse / rape	0.11	**0.67**	0.15	0.37
24d. Negative jokes about LGBT individuals	-0.01	0.04	**0.63**	0.30
27. Victimisation over past 24 months				
27a. Verbal abuse / harassment	0.19	0.25	**0.51**	0.34
27b. Physical abuse / assault	0.22	**0.56**	0.10	0.32
27c. Sexual abuse / rape	0.06	**0.68**	0.09	0.34

The highest loading for each attribute is indicated in bold.

The KMO was 0.76 and the Cronbach's Alpha for the scale was 0.79. Fear of victimisation, as a subscale, had a Cronbach's Alpha of 0.79. Verbal and physical victimisation had Cronbach's Alphas of 0.71 and 0.75 respectively.

The item-total correlations for the subscales and the Cronbach's Alphas for the subscales if an item is deleted are shown in Table 4.8.

Table 4.8: Corrected item-total correlations and Cronbach's Alpha if item deleted for the victimisation subscales

Subscale items	Corrected item-total correlations	Cronbach's Alpha if item deleted
Fear of victimisation		
23a. Verbal abuse / harassment	0.52	0.82
23b. Physical abuse / assault	0.76	0.57
23c. Sexual abuse / rape	0.63	0.72
Hate speech		
24a. Verbal abuse / harassment at school	0.62	0.49
24d. Negative jokes about LGBT individuals at school	0.49	0.67
27a. Verbal abuse / harassment over past 24 months	0.49	0.67
Physical victimisation		
24b. Physical abuse / assault at school	0.57	0.71
24c. Sexual abuse / rape at school	0.61	0.65
27b. Physical abuse / assault over past 24 months	0.54	0.70
27c. Sexual abuse / rape over past 24 months	0.56	0.70

4.1.5 Alcohol and drug use

A factor analysis using the maximum likelihood extraction method was conducted on all items measuring alcohol and drug use. A varimax rotation was used. Once again, mean-substitution was used for missing data. Missing data was less than 8% for all items.

Two factors emerged with eigenvalues of 2.62 and 1.48 respectively. The factors accounted for 82.05% of the variance, of which 52.47% was from the first factor and 29.58% from the second factor. The scree plot is shown in Graph 4.5. The factor loadings and communalities of the items can be seen in Table 4.9.

Factor 1 refers to alcohol use and factor 2 to drug use. Composite variables were calculated for each of these aspects using the factor scores.

Graph 4.5: Scree plot from factor analysis of the alcohol and drug use items

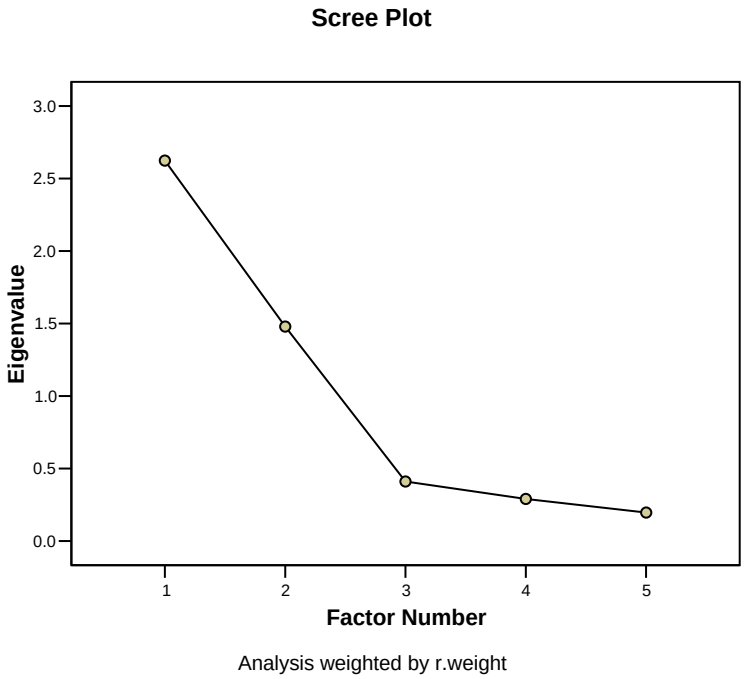


Table 4.9: Factor loadings and communalities for the alcohol and drug use items

Scale items	Factor loading		Communalities
	1	2	
Alcohol use			
*45. Perceptions of self	**0.74**	0.10	0.47
*46. Frequency of alcohol use	**0.88**	0.09	0.58
*47. Frequency of Inebriation	**0.77**	0.17	0.52
Drug use			
*48. Frequency of drug use	0.15	**0.82**	0.65
*50. Perceptions of self	0.11	**0.96**	0.65

*Not actual questionnaire wording. Refer to appendix A. Note: The highest loading for each attribute is indicated in bold.

The KMO was 0.66, which is mediocre and indicates that more items should have been sampled to adequately measure alcohol and drug use.

Reliability analysis showed that the Cronbach's Alpha for the entire scale was 0.77. The alcohol use subscale had a Cronbach's Alpha of 0.84 and drug use subscale had a Cronbach's Alpha of 0.81. This indicated a reliable scale with high internal consistency. The drug use subscale comprised two items, thus the Cronbach's Alpha for the subscale if an item is deleted could not be calculated. The item-total correlation was 0.66 for both items. The item-total correlations and the Cronbach's Alphas for the alcohol use subscale if an item is deleted are shown in Table 4.10.

Table 4.10: Corrected item-total correlations and Cronbach's Alpha if item deleted for the alcohol use subscale

Subscale items	Corrected item-total correlations	Cronbach's Alpha if item deleted
Alcohol use		
*45. Perceptions of self	0.70	0.83
*46. Frequency of alcohol use	0.79	0.70
*47. Frequency of Inebriation	0.72	0.76

*Not actual questionnaire wording. Refer to appendix A.

4.1.6 All variables

After finalising the scales it was necessary to check that all the variables were measuring distinct constructs. It is important for the multiple regression modelling that the independent variables did not overlap in terms of the constructs. In order to confirm this, a factor analysis was conducted which included the items used to measure all the composite variables, including vulnerability to depression. The maximum likelihood extraction method was used with a varimax rotation. Mean substitution was employed for missing data on any variable. The factor loadings

are illustrated in Table 4.11 and the factor names are illustrated in Table 4.12.

All items loaded strongly on the factor representative of the respective composite variables. This illustrated that each composite variable was measuring a distinct construct. The only item which clearly loaded on more than one factor was 24b which related to physical abuse at school. This item loaded strongest on factor 5 (physical victimisation) and had a slightly lower, but strong loading on factor 7 (hate speech). One could aver that people who have experienced physical victimisation at school with regards to their sexual orientation have also experienced hate speech, resulting in a loading on both factors. The reciprocal, however, of having experienced physical victimisation if hate speech has been experienced, is not necessarily true. Thus the hate speech items do not load strongly on the physical victimisation factor.

All the social integration items loaded together on factor 1 and did not split out into the two factors relating to disclosure of sexual orientation and socialisation within LGBT communities. As a result the factor analysis on the individual scale was re-evaluated and a decision made to force the variables into one factor and create one composite variable using the factor score. The scree plot did indicate that one factor is likely and the variance explained by the second factor only resulted in a 12.25% increase.

The factor loadings for the social integration items forced into one factor are shown in Table 4.13.

Table 4.11: Factor loadings for items for all composite variables

Items	Factor loadings								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
*15a. Out to my family	**0.71**	-0.01	-0.04	-0.07	0.11	-0.04	0.15	0.10	0.09
*15b. Out to my friends	**0.70**	0.09	0.01	-0.07	-0.06	-0.08	0.15	0.05	0.02
*15d. Out to community	**0.62**	0.03	0.00	-0.04	0.04	-0.04	0.09	0.04	0.16
*16. Integration with LGBT people	**0.55**	0.03	0.06	0.08	-0.07	-0.04	0.08	0.15	0.03
*17. Current portion of LGBT friends	**0.50**	0.04	0.05	0.15	0.06	0.01	0.01	-0.02	0.15
*18. Leisure time spent with LGBT people	**0.47**	0.04	0.00	0.01	0.09	0.06	0.08	-0.11	0.09
*19a. LGBT bars and clubs	**0.57**	-0.01	-0.03	-0.02	0.08	0.06	-0.11	0.04	-0.08
*19d. LGBT events (film festival, Pride Parade, etc.)	**0.45**	0.03	-0.02	0.11	0.08	0.09	-0.13	0.02	-0.12
*19f. Homes of other LGBT friends	**0.52**	0.07	0.14	-0.05	-0.02	0.03	-0.03	-0.03	-0.04
*23a. Fear of verbal abuse	-0.04	0.04	0.05	**0.52**	0.26	-0.04	0.09	-0.07	-0.14
*23b. Fear of physical abuse	0.04	0.06	0.02	**0.99**	0.10	-0.01	0.09	-0.06	0.01
*23c. Fear of sexual abuse / rape	0.05	0.03	0.00	**0.68**	0.13	-0.12	0.12	-0.01	0.04
*24a. Verbal abuse at school	0.13	0.10	0.09	0.15	0.16	-0.06	**0.75**	-0.08	-0.03
*24b. Physical abuse at school	0.05	0.16	-0.03	0.17	**0.55**	0.03	**0.47**	-0.01	0.04
*24c. Sexual abuse at school	0.05	0.10	-0.07	0.09	**0.69**	-0.01	0.11	0.00	-0.06
*24d. Negative jokes at school	0.03	0.17	0.02	-0.02	0.04	0.04	**0.63**	0.01	0.03
*27a. Verbal abuse / harassment over past 24 months	0.05	0.05	0.08	0.19	0.24	-0.05	**0.51**	-0.08	-0.11
*27b. Physical abuse / assault over past 24 months	0.03	0.05	0.05	0.21	**0.53**	0.01	0.10	-0.06	0.09
*27c. Sexual abuse / rape over past 24 months	0.14	0.01	0.05	0.05	**0.68**	-0.04	0.06	-0.01	-0.01
*45. Perceptions of self as alcohol user	0.03	0.10	**0.73**	0.06	0.01	0.08	0.05	-0.02	0.03
*46. Frequency of alcohol use	0.13	0.06	**0.88**	0.00	-0.04	0.06	0.02	0.01	0.02
*47. Frequency of Inebriation	-0.01	-0.01	**0.78**	0.00	0.06	0.15	0.08	-0.05	0.00
*48. Frequency of drug use	0.07	0.02	0.18	-0.08	-0.02	**0.78**	-0.05	-0.04	0.02
*50. Perceptions of self as drug user	0.01	-0.01	0.14	-0.10	-0.04	**0.98**	0.01	-0.02	0.04
*51a. Live two lives	0.13	-0.09	0.05	0.03	0.06	0.05	0.00	0.12	**0.79**
51b. I feel like I do not belong	0.12	-0.10	0.01	-0.13	-0.05	0.01	-0.08	0.41	**0.66**
51d. I often feel rejected	0.14	-0.21	-0.01	0.01	-0.01	-0.14	-0.07	**0.54**	0.23
51e. I feel useless at times	0.02	-0.22	-0.05	-0.04	0.00	-0.01	-0.01	**0.73**	-0.01
*51f. Not as happy as others	0.03	-0.21	0.00	-0.08	-0.08	0.04	-0.04	**0.61**	0.18
*52a. Think about suicide	0.03	**0.41**	-0.01	0.06	0.12	0.13	0.12	-0.17	-0.14
52b. I have trouble getting to sleep or staying awake	0.01	**0.64**	-0.03	0.04	-0.08	0.04	0.07	-0.19	-0.02
*52c. Pains in the head	0.05	**0.67**	0.08	0.01	0.21	-0.08	0.09	-0.14	0.05
*52d. Appetite	0.08	**0.69**	0.07	0.08	0.04	-0.05	0.08	-0.11	-0.03
*52e. Difficult getting up	0.13	**0.74**	0.06	-0.05	0.04	0.01	0.05	-0.04	-0.07

*Not actual question phrasing. Refer to appendix A. Note: The highest loading for each attribute is indicated in bold.

Table 4.12: Composite variables that emerged out of the factor analysis illustrated in Table 4.11

Factor	Composite variables
Factor 1	Social integration
Factor 2	Vulnerability to depression
Factor 3	Alcohol use
Factor 4	Fear of victimisation
Factor 5	Physical victimisation
Factor 6	Drug use
Factor 7	Hate speech
Factor 8	Self-esteem (self-regard)
Factor 9	Self-esteem (alienation)

Table 4.13: Factor loadings and communalities for the social integration items (forced into one factor)

Scale items	Factor loading
15. I am out (open about my sexual orientation to…)	
15a. my family	0.73
15b. my friends	0.71
15d. work colleagues	0.64
*16. Integration with other LGBT people	0.56
*17. Current portion of LGBT friends	0.51
*18. Leisure time spent with LGBT people	0.48
19. How frequently do you socialise at…?	
19a. LGBT bars and clubs	0.54
19d. LGBT events (film festival, pride march, etc.)	0.42
19f. the homes of other LGBT friends	0.51

*Not actual questionnaire wording. Refer to appendix A.

The item-total correlations ranged from 0.41 to 0.63. The item-total correlations and the Cronbach's Alpha for the scale if an item is deleted are shown in Table 4.14.

Table 4.14: Corrected item-total correlations and Cronbach's Alpha if item deleted for the social integration items

Scale items	Corrected item-total correlations	Cronbach's Alpha if item deleted
15. I am out (open about my sexual orientation to…		
15a. my family	0.61	0.78
15b. my friends	0.63	0.78
15d. work colleagues	0.54	0.79
*16. Integration with other LGBT people	0.48	0.80
*17. Current portion of LGBT friends	0.47	0.80
*18. Leisure time spent with LGBT people	0.47	0.80
19. How frequently do you socialise at…?		
19a. LGBT bars and clubs	0.50	0.80
19d. LGBT events (film festival, pride march, etc.)	0.41	0.81
19f. the homes of other LGBT friends	0.51	0.80

*Not actual questionnaire wording. Refer to appendix A.

Table 4.15 provides a summary of the composite variables used in the analysis which follows.

Table 4.15: Summary of composite variables and reliabilities

Composite variable	Number of items	Cronbach's Alpha
Vulnerability to depression	4	0.80
Self-esteem (alienation)	2	0.74
Self-esteem (self-regard)	3	0.72
Social integration	9	0.81
Fear of victimisation	3	0.79
Hate speech	3	0.71
Physical victimisation	4	0.75
Alcohol use	3	0.84
Drug use	2	0.81

4.2 SOCIO-DEMOGRAPHIC VARIABLES AND VULNERABILITY TO DEPRESSION

No hypothesis was made regarding the influence of the socio-demographic variables on vulnerability to depression. However, these elements were investigated as part of the exploratory research of the study.

The relationship between age and vulnerability to depression, as well as educational status and vulnerability to depression, was investigated. In addition, the differences between the mean scores for vulnerability to depression of black and white respondents, as well as gay men and lesbian women, were explored.

A two-tailed Pearson's product moment correlation was calculated between age and vulnerability to depression for the sample. No significant relationship emerged between age and vulnerability to depression ($r = 0.01$, $p = 0.846$).

Similarly, the relationship between educational status and vulnerability to depression was investigated using the Pearson's product moment correlation (two-tailed). No significant relationship was found between level of education and vulnerability to depression ($r = -0.08$, $p = 0.163$).

An independent sample student's t-test was conducted to identify if any significant difference existed between black and white participants with regards to vulnerability to depression. The mean score for black participants was -0.06 (SD = 0.89), and white participants 0.22 (SD = 0.91). Scores for the sample ranged from -1.15 to 2.52. A significant difference was found, with black participants having significantly lower mean scores for vulnerability to depression than white participants ($t = -2.53$, $df = 383$, $p = 0.012$). However the effect size, $r = 0.13$, was small (Cohen, 1998), and further research would be needed to confirm that this is not a type 1 error, as well as to understand the reasons for this difference.

Similarly, differences between the mean scores for vulnerability to depression of gay men (mean = 0.004, SD = 0.93) and lesbian women (mean = -0.002, SD = 0.86) were investigated using an independent sample student's t-test. No significant differences were found (t = -0.07, df = 379, p = 0.949).

4.3 PSYCHOLOGICAL CORRELATES WITH VULNERABILITY TO DEPRESSION

Table 4.16 contains the results of the Pearson's correlations (one-tailed) between vulnerability to depression and the composite variables for self-esteem (alienation and self-regard), social integration, fear of victimisation, hate speech, physical victimisation, alcohol use and drug use. With the exception of drug use, all variables were significantly correlated with vulnerability to depression. Although the correlations were significant, the product-moment coefficients in most cases were less than 0.30 (with the exception of self-regard) indicating a small effect size. Further research needs to be conducted to confirm these relationships, as well as to confirm the strength of the relationships.

Table 4.16: Correlations between vulnerability to depression and composite variables

Composite variable	Pearson's correlation coefficient (r)
Self-esteem (alienation)	-0.11*
Self-esteem (self-regard)	-0.36**
Social integration	0.13*
Fear of victimisation	0.09*
Hate speech	0.24**
Physical victimisation	0.14*
Alcohol use	0.12*
Drug use	-0.02

One-tailed significance *p < 0.05; **p < 0.001

Both elements of self-esteem, namely, alienation ($r = -0.11$, $p = 0.014$) and self-regard ($r = -0.36$, $p = 2.586E\text{-}13$), had a significant negative correlation with vulnerability to depression, confirming the hypothesis that higher self-esteem results in a lowered vulnerability to depression. The magnitude of the effect was small ($r < 0.30$) for alienation and moderate ($0.30 < r < 0.50$) for self-regard (Cohen, 1998).

Contrary to the hypothesis, social integration had a significant positive correlation with vulnerability to depression ($r = 0.13$, $p = 0.006$) rather than a significant negative correlation. This implies that the more socially integrated gay men and lesbian women are, the more vulnerable they are for depression. Thus the hypothesis was rejected. Although a significant correlation was found, the effect size ($r < 0.30$) was small (Cohen, 1998).

Social integration in this research was seen to be a combination of disclosure of sexual orientation and socialisation within LGBT communities. The assumption was that this would be indicative of the social support one has, and increased social support would result in decreased vulnerability to depression. However, a standardised scale for social support was not used and the extent of socialising within broader communities was not included as part of the measure of social integration. One could aver that gay men and lesbian women, who spend most of their time socialising amongst LGBT people and in exclusively LGBT venues, are not obtaining sufficient support from broader communities and are perhaps less integrated within broader communities. This may result in decreased social support outside LGBT communities and thus increase vulnerability to depression. Further research would be needed to confirm this.

The hypothesis that alcohol use was significantly positively correlated to vulnerability to depression was confirmed ($r = 0.12$, $p = 0.008$). Thus the more one uses alcohol the more one is at risk for depression. Once again, although the relationship is significant, the magnitude of the effect, indicated by the effect size, r

< 0.30, was small (Cohen, 1998).

No significant positive correlation emerged between drug use and vulnerability to depression. The hypothesis that increased drug use results in an increased vulnerability to depression was therefore rejected.

Both hate speech ($r = 0.23$, $p = 2.383E\text{-}6$) and physical victimisation ($r = 0.14$, $p = 0.003$) had significant positive correlations with vulnerability to depression, confirming the hypotheses that increased victimisation results in a greater risk for depression. The size of these effects was small as $r < 0.30$ in both cases (Cohen, 1998).

There was a significant positive relationship between fear of victimisation and vulnerability to depression ($r = 0.09$, $p = 0.043$); thus the hypothesis that increased fear of victimisation results in an increased risk for depression was accepted, although the effect size, $r < 0.30$, was small (Cohen, 1998).

4.4 RISK FACTORS FOR DEPRESSION

Multivariate regression analysis was used to determine the effects that self-esteem (alienation and self-regard), social integration, fear of victimisation, hate speech, physical victimisation, alcohol use and drug use had on vulnerability to depression.

4.4.1 Regression model

In order to allow for the validation of the model, 75% of the respondents (n = 297) were randomly selected and the regression model was developed from this sub-sample of respondents. The remaining 25% of the sample (n = 88) was used to validate the model.

The entire model accounted for 21.7% of the variance in the vulnerability to

depression scores (*F*[8, 288] = 9.97, p = 2.90E-12). Although the effect size for the model was moderate (r = 0.47), it is imperative that further research is conducted to validate the model.

Contrary to the hypothesis, results showed that fear of victimisation, physical victimisation, social integration, alcohol use and drug use were not significant risk factors for vulnerability to depression. Table 4.17 illustrates the standardised regression coefficients for the variables which had a significant impact on vulnerability to depression, namely self-esteem (self-regard), self-esteem (alienation) and hate speech. The inter-correlation matrix[10] of the variables entered into the regression is displayed in Table 4.18.

Self-esteem (self-regard) had the strongest influence on vulnerability to depression among gay men and lesbian women, followed by hate speech. Interestingly, hate speech was the only aspect of victimisation which had a significant impact on vulnerability to depression. Physical victimisation correlated significantly with hate speech and thus may have not offered any significant contribution to the variance in the vulnerability to depression scores that was not already accounted for by hate speech.

Table 4.17: Standardised regression coefficients for the composite variables which had a significant impact on vulnerability to depression

Composite variable	Beta	Significance
Self-esteem (self-regard)	-0.278	3.76E-07
Self-esteem (alienation)	-0.145	0.007
Hate speech	0.214	8.072E-05

[10] The correlations displayed in Table 4.18 differ from those displayed in Table 4.16. Table 4.16 indicates correlations calculated using the full sample and Table 4.18 displays correlations calculated using 75% of the sample.

Table 4.18: Inter-correlation matrix of variables used in the regression model (n = 297)

	Vulnerability to depression	Self-esteem (self-regard)	Self-esteem (alienation)	Hate speech	Social integration	Fear of victimisation	Physical victimisation	Alcohol use	Drug use
Vulnerability to depression	1.00	-0.33**	-0.19**	0.29**	0.08	0.05	0.14*	0.15*	-0.03
Self-esteem (self-regard)	-0.33**	1.00	0.14*	-0.12*	0.06	-0.07	-0.06	-0.06	-0.03
Self-esteem (alienation)	-0.19**	0.14*	1.00	-0.07	0.17*	-0.01	-0.01	0.01	0.08
Hate speech	0.29**	-0.12*	-0.07	1.00	0.11*	-0.01	0.12*	0.11*	-0.05
Social integration	0.08	0.06	0.17*	0.11*	1.00	0.01	0.12*	0.11*	-0.05
Fear of victimisation	0.05	-0.07	-0.01	-0.01	0.01	1.00	0.03	0.06	-0.13*
Physical victimisation	0.14*	-0.06	-0.01	0.12*	0.12*	0.03	1.00	0.02	-0.06
Alcohol use	0.15*	-0.06	0.01	0.11*	0.11*	0.06	0.02	1.00	0.03
Drug use	-0.03	-0.03	0.08	-0.05	-0.05	-0.13*	-0.06	0.03	1.00

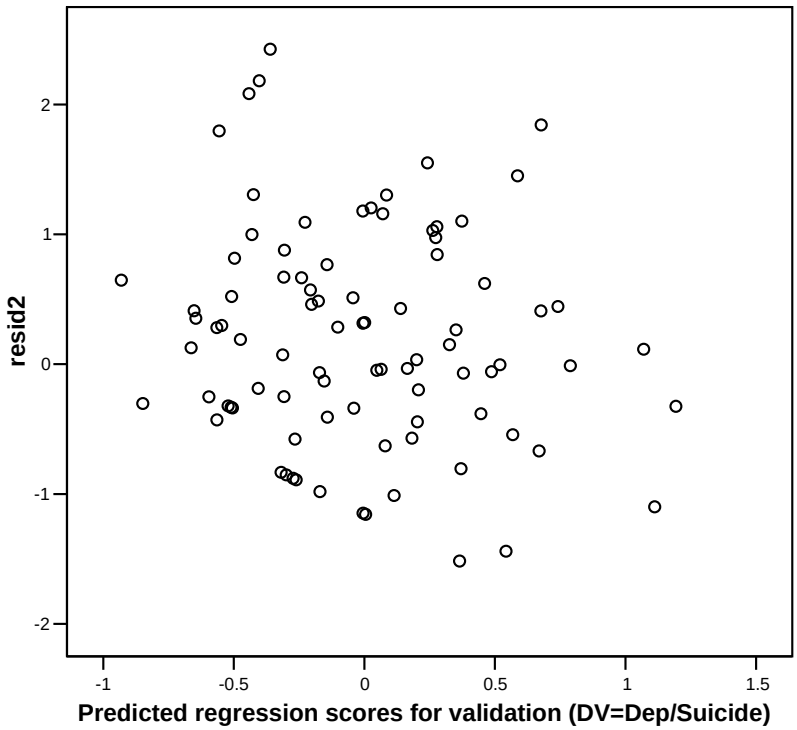
*p < 0.05; **p < 0.001

4.4.2 Model validation

To validate the model, the Pearson's correlation coefficient was calculated between the actual scores for vulnerability to depression and the predicted scores for vulnerability to depression. The predicted scores were obtained from the regression model equation, using data from the 25% sub-sample (n = 88) that was excluded from the regression modelling. A significant positive correlation was obtained (r = 0.36, p = 0.001), indicating a valid model. Although significant, the correlation was mediocre and further research is recommended to confirm the model results.

The graph of the residuals and the predicted depression scores can be seen in Graph 4.6. The residuals were randomly distributed, further confirming the model.

Graph 4.6: Residuals and predicted vulnerability to depression scores for the 25% validation sample



Cases weighted by Respondent weights (age, sex, race)

Chapter 4 presented the results from the research. A more detailed discussion of the results will be presented in the following chapter. Chapter 5 will also include recommendations for further research and outline the limitations of the study.

Chapter 5

DISCUSSION, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

In order to build expertise and to address the lack of South African research on the topic, this study investigated which factors could increase vulnerability to depression among gay men and lesbian women in Gauteng, South Africa. Past international research, and to a limited extent, previous South African research, highlighted low self-esteem, lack of social support, victimisation, alcohol use and drug use to be factors which could increase vulnerability to depression among LGBT individuals. This chapter includes a discussion of the results outlined in chapter 4, while also making recommendations for future research. The chapter concludes with references to the limitations of the study and recommendations on how these can be overcome in further studies of this nature.

5.1 DISCUSSION AND RECOMMENDATIONS FOR FURTHER RESEARCH

A model of vulnerability to depression was developed, in which self-esteem and hate speech emerged as the only aspects having a significant effect on vulnerability to depression, with lowered self-esteem and more frequent experiences of hate speech resulting in increased vulnerability to depression. This confirms the results from past studies that showed that higher self-esteem results in lower levels of depression (D'Augelli et al., (2001); Luhtanen, 2003; Otis & Skinner, 1996; Zea et al., 1999).

Considering the impact that self-esteem has on vulnerability to depression, it is important for psychotherapists, teachers and parents of gay and lesbian individuals to be aware of the importance of building self-esteem. Increased visibility of positive LGBT role models in the media can also aid in enhancing self-esteem and reducing internalised homophobia. LGBT activists and organisations

can implement strategies to increase self-esteem through the positive portrayal of LGBT issues in the media and through support networks.

Although physical victimisation was significantly correlated with vulnerability to depression, it did not emerge as having a significant impact in the regression model. This could be due to the role that self-esteem has in moderating the impact of these stressors. Experiences of physical victimisation could lower self-esteem which results in an increased vulnerability to depression. Similarly, it is possible that gay men and lesbian women, with lower self-esteem, fear victimisation more than those with higher self-esteem. Future research which employs a more robust measure of self-esteem should investigate the role that self-esteem plays in moderating the impact of stressors on vulnerability to depression. In the current research, physical victimisation and fear of victimisation were not significantly correlated. This result was unexpected. While it may be true, it requires confirmation with further research using a better measure of the constructs. An explanation for this could be linked to the high level of crime in South Africa, in particular violent crime. In order to manage the stress which results from living in a violent society, fear of crime and experiences of crime are less internalised and the impact could be divorced from the individual. This is consistent with the findings reported by Smith and Glanz (1996), which were that fear of crime increases with an increase in perceived risk of crime. However this relationship only holds true up to a certain threshold beyond which fear decreases and individuals deny their high risk of victimisation (Smith & Glanz, 1996).

The fact that hate speech had a greater impact on vulnerability to depression than physical victimisation warrants discussion. This could be explained through physical victimisation being more visible and tangible. If one experiences physical victimisation, one has the choice to report this to the police and one is more likely to obtain empathy and support from family and friends than when one has been a victim to hate speech. This could allow one to deal with the trauma more effectively (should one choose to and if this help is accessible). Although one can

report incidents of hate speech to the police, it is less acceptable to do so even though hate speech is experienced more frequently than physical victimisation. Hate speech can thus result in internalised distress which can manifest as depression. Thirty-nine percent of the participants in this study had experienced hate speech. Hate speech, according to Reddy (2002), is a vector for further victimisation, both physical and sexual, as well as perpetuating the misconception that heterosexuality is the only normal expression of sexuality. This can have several repercussions, including depression and suicide (Reddy, 2002).

Considering the impact that hate speech has on mental well-being, interventions to minimise hate speech must be implemented. In South Africa, legislation has been proposed in this regard. The Draft Prohibition of Hate Speech Bill, 2004, limits the public expression of prejudices or hate (Nel, 2005a). However, the proposed Hate Speech Bill has not mentioned sexual orientation, and refers only to the public expression of hatred based on race, gender, ethnicity and religion. Lobbying is underway to allow for the inclusion of sexual orientation in the Hate Speech Bill. If sexual orientation is included, and once this Bill is passed, this Bill will need to be enforced in order to realise the benefits this should have in terms of protecting marginalised groups. In addition to the Bill, diversity training for workers within the criminal justice system must be employed in order for gay men and lesbian women to obtain objective service without prejudice. Gay men and lesbian women need to feel comfortable that they can report incidents of hate speech as well as other forms of victimisation without the threat of further victimisation or having their sexual orientation exposed.

Although building effective reporting systems will enable gay men and lesbian women to feel more inclined to report incidents to the police, there need to be interventions which assist in preventing hate speech from occurring. If the proposed Hate Speech Bill includes sexual orientation, it will aid in education but multiple interventions are required to minimise incidents of hate speech. There needs to be active education and diversity training in schools with teachers,

students and parents. Sexual orientation should also be made more visible in the curriculum. For example, subjects such as life orientation need to cover issues relevant to gay men and lesbian women.

It is noted that all people adopt a particular value system and worldview. Endorsing same-sex sexual orientations may clash with some value systems. Value systems which have entrenched negative attitudes toward same-sex sexual orientations are difficult to change. Changing these attitudes should not be an objective. These prejudices are often deeply entrenched through religious and cultural roots in which same-sex sexual orientation is viewed as a 'sin' or as 'un-African' (Nel, 2005a). What is important is a sensitisation and awareness of same-sex sexual orientation and laws which allow for, and protect, different values. This will result in the minimisation of the marginalisation of gay men and lesbian women, as well as a reduction in public expressions of prejudice. Continuous efforts here can reduce heterosexism and homophobia.

When planning and implementing treatment for gay men and lesbian women, mental health workers need to consider the impact that hate speech and reduced self-esteem has on increasing vulnerability to depression.

Policies and procedures protecting gay men and lesbian women from hate speech in the workplace must also be enforced, and diversity training programmes implemented.

Although social integration into LGBT communities did not offer any additional significant contribution to the model that was not already accounted for by self-esteem and hate speech, it did have a weak significant positive correlation with vulnerability to depression. This was interesting as this implied that the more one was integrated into LGBT communities, the more one is vulnerable to depression. This may have been a type 1 error as the correlation was small when calculated for the entire sample. However, the relationship was not significant when

calculated for the 75% of the sample used to develop the regression model. Social integration into LGBT communities was significantly positively correlated with self-esteem (alienation), hate speech, physical victimisation and alcohol use. This means that the more gay men and lesbian women are integrated into LGBT communities, the higher their self-esteem and the higher the frequency of hate speech, physical victimisation and alcohol use.

There could be several reasons for this. The scale measured integration into LGBT communities and not broader communities. Thus although this could be an indication of access to social support from LGBT communities, and hence the higher self-esteem, it cannot be assumed to be an indication of support from broader communities. Past research has shown that social support (if positive and endorsing) can increase self-esteem, as well as reduce stress and the probability of depression (Luhtanen, 2003; Oetjen & Rothblum, 2000; Otis & Skinner, 1996; Vincke & Bolton, 1994; Vincke & van Heeringen, 2002; Zea et al., 1999). Further research should include a measure of social support that also encompasses support from broader communities, as well as a measure of satisfaction with the support. It would be negligent to conclude that the findings of the research imply that social support does not reduce vulnerability to depression. It is possible that social support serves to increase self-esteem, but apart from self-esteem this does not offer any additional contribution to vulnerability to depression. However, there is a need for further research to be conducted, in order to develop a better understanding of the interaction of these variables.

In addition, social integration included aspects relating to disclosure of sexual orientation as well as socialisation within LGBT communities. Thus it is possible that the more integrated one is in LGBT communities the more visible one is as a gay man or lesbian women. Hence, the increased visibility could leave one more vulnerable to hate speech and physical victimisation, as well as alcohol use. This may explain the positive correlation between integration into LGBT communities and these variables. Bars are often the only point of access for gay men and

lesbian women into gay communities. Unlike Australia, the Netherlands, the UK and the USA, there are no LGBT geographical locations or neighbourhoods where LGBT businesses are concentrated (Nel, 2005b). As a result entry into gay and lesbian communities in South Africa does not necessarily allow for positive and endorsing relationships and role models that provide support and mentorship. There is a need to develop more LGBT-friendly social spaces in South Africa which will allow for sharing of experiences, networking and identification with positive role models. This will allow for the development of a culture to replace the mainstream heterosexist culture that is often rejected by gay men and lesbian women.

Another influencing element to consider is that the majority of the participants in this survey were open about their sexual orientation, even if only to their friends. The inclusion of participants who are not out to anyone could increase the variance in the social integration variable and provide more accurate insight into the relationship between these variables. Additional research is thus needed to validate and expand on these findings.

Findings in past research have been contradictory when considering the relationship between depression and alcohol and drug use (Anderson, 1996; Hughes & Eliason, 2002). These contradictions are a reminder of the multi-faceted nature of both depression and substance use. In the present study alcohol use had a significant but small positive relationship with vulnerability to depression, although this did not emerge as a risk factor in the regression model. Drug use had no significant relationship with vulnerability to depression. It is recommended that a more robust scale for both alcohol and drug use is employed in future research conducted to validate these results.

No significant relationship was found between educational level and vulnerability to depression. Similarly, there was no significant relationship between age and vulnerability to depression. Although no hypothesis was made regarding age and

vulnerability to depression, one could aver that young gay men and lesbian women could be more at risk for depression due to the fact that they would be coming to terms with their sexual orientation in a heterosexist and homophobic society and finding the means to disclose their sexual orientation. This could result in substantial internal conflict. Similarly, older gay men and lesbian women grew up during a time when homosexuality was illegal and thus may have not developed the social networks from which to obtain support. Thus, initially the result of age having no relationship with depression was thought to be due to a non-linear relationship between these variables. However the scatterplot of age and vulnerability to depression confirmed that no relationship between the variables was present for the sample.

Findings indicated a significant difference in vulnerability to depression between black and white participants, with white participants being more vulnerable to depression than black participants. The size of this effect was small. Further research would be needed to verify this finding as well as determining what the reasons for this are. Black and white participants came from differing socio-economic backgrounds. Due to the lack of a robust measure of affluence in the questionnaire, this element was not taken into account when applying population weights to the data. There may be a relationship between socio-economic status and risk for depression that should be considered in future research.

Interestingly, no significant differences were found between gay men and lesbian women with regards to vulnerability to depression, which does not support research in the general population that indicates that women are more at risk for depression than men (Health24, n.d.). Considering the patriarchal nature of South African society, in which men are seen as dominant and aggressive, gay men who do not conform to traditional gender roles are seen as a threat to these norms (Nel, 2005a). They are thus a target for victimisation and could be more vulnerable for depression. Once again this warrants further investigation that takes the complexities of sexual identity and gender roles into account.

5.2 LIMITATIONS

The limitations of the research which warrant discussion and consideration when designing further research are factors related to the sample and the instrument employed.

5.2.1 Sample

A considerable limitation of the current research is the issue of its representivity of the gay and lesbian population in Gauteng. Although the sampling method and the weighting of the data ensured that the results were representative in terms of race (black and white), sex and age, participants who had not disclosed their sexual orientation could have been under-represented. The online questionnaire was used as a tool to sample individuals who had not disclosed their sexual orientation but only resourced gay men and lesbian women were able to complete the survey online. Of these participants, the majority were open about their sexual orientation. The impact of the variables on vulnerability to depression could differ among gay men and lesbian women who have not disclosed their sexual orientation. These individuals would lack social support, could have higher levels of internalised homophobia and lower self-esteem, and possibly be more at risk for depression. Although gay men and lesbian women who have not disclosed their sexual orientation could be less at risk for victimisation, they may be indirectly exposed to hate speech and physical victimisation through the media and as observers. Even if this is not directed toward them, the awareness of homophobia could result in reduced self-esteem, a reluctance to be open about their sexual orientation and an increased risk for depression. Innovative methods to obtain access to gay men and lesbian women who are not open about their sexual orientation need to be developed in order to research the impact of these variables on vulnerability to depression.

Another limitation of the sample was the inability to determine socio-economic

status. Due to the lack of a reliable measure of socio-economic status as well as the amount of missing data on the area of residence question, this variable could not be used as a contributing factor for the weighting of the data even though the sampling method ensured the inclusion of participants from less resourced areas. Future research needs to include a reliable measure of socio-economic status such as the Life-style Measure (indicator of affluence). This is a segmentation tool developed specifically for South Africa. The impact of socio-economic status on vulnerability to depression can then be evaluated.

A further limitation is that the results of this study refer only to black and white participants in Metropolitan Gauteng. Although coloured and Indian participants were sampled, they were not specifically targeted. The sample sizes for these population groups were too small to allow weighting and were excluded from analysis. Future research is needed that includes a sufficient sample of coloured and Indian South Africans to see if the factors affecting depression are similar to those for black and white participants. Similarly, research is necessary in rural areas as gay men and lesbian women may be less visible in these areas and factors such as social support may be less available.

The present study excluded gay men and lesbian women over the age of 40 years, due to interventions initiated by the JWG being aimed at gay men and lesbian women under the age of 40 years. Further research which includes older gay men and lesbian women is needed, as their lifestyles and experiences could be different to younger gay men and lesbian women.

Other than the actual sample composition, the sampling method was not random. This was due to the difficulties in obtaining access to gay men and lesbian women. The use of a convenience sample could have resulted in a bias towards those participants who had contact with LGBT organisations and were thus more integrated into LGBT communities. Similarly, a bias towards students may have resulted as a substantial part of the sample included students. In spite of these

limitations, the sample was an improvement on previous studies conducted in South Africa which included predominantly white, highly-educated gay men. Ideally, future research should include a random selection of participants obtained through a census or other random probability methods. However, the cost of employing such methodologies is seldom viable when considering available funds.

Another limitation of the research is that illiterate gay men and lesbian women could not be included in the sample, as well as those who were not proficient in English. This was due to the fact that the questionnaire was available in English only due to the cost of translations and back-translations. Although the impact of misinterpreting questions could be controlled with group administration, this could not be controlled when the questionnaires were completed via snowballing methods. The piloting of the questionnaires did allow for changes to be made prior to fieldwork so the impact of misinterpretation was minimised where possible.

5.2.2 Instrument

Future researchers in this field are encouraged to consider some of the methodological limitations of the measurements used in this study. First, the questionnaire lacked standardised scales to measure depression, social integration, self-esteem, types of victimisation, alcohol abuse and drug abuse. Although items sampled to measure disclosure of sexual orientation, victimisation, self-esteem and depression were taken or adapted from existing sources (see chapter 3, section 3.1.2), further research is needed to determine the external validity of these scales. Until these measures are validated, it is recommended that existing standardised scales are used to measure these constructs for future research. This will allow for more reliable comparability across research.

Second, results revealed that the measure of social integration into LGBT communities as an indicator of social support is questionable. Considering the role that social support plays in moderating the impact of stress on depression, as

shown in past research (Luhtanen, 2003; Oetjen & Rothblum, 2000; Otis & Skinner, 1996; Vincke & Bolton, 1994; Vincke & van Heeringen, 2002; Zea et al., 1999), it is recommended that future studies include measures of social support from LGBT communities as well as from heterosexual family, friends and broader communities. A measure of satisfaction of support is also recommended.

Third, in the present study, victimisation included measures of victimisation experienced at school, as well as victimisation experienced over the past 24 months. The items for victimisation experienced at school referred specifically to victimisation in relation to being an LGBT individual, whereas victimisation experienced in the past 24 months could have included victimisation unrelated to sexual orientation. It is important not to exclude either as both could impact on depression, but future research should distinguish between the two and include separate measures. Also the impact that victimisation at school has on one's mental health could diminish as one gets older, which may have influenced the impact that this had on depression for this sample. Further research into gay and lesbian scholars and depression is recommended.

Fourth, the questionnaire needs to be adapted to be more user friendly, with more clarity on where single or multiple responses are needed. This did not pose a problem with more educated participants but less educated participants did struggle on occasion and as a result some questionnaires had to be excluded from the research. These were only excluded when it was clear that participants did not understand how to complete the questionnaire. Due to the sensitive nature of the research, participants generally did not feel comfortable about being interviewed by a trained interviewer and self-completion was more confidential. Thus making the questionnaire more user-friendly is the best solution.

Similarly, less educated respondents could not follow the routing of the questions accurately and on occasion answered questions which were not meant to be answered based on earlier filter questions. This was then corrected through data

cleaning. Clearer routing instructions must be included in future studies that include less educated participants.

Lastly, scales used in the questionnaire included mostly four- and five-point scales. For model development, it is recommended that more discriminating scales are used.

5.3 CONCLUSION

This research represents the first large scale study conducted in South Africa which included not only white resourced gay men, but also black and white lesbian women and black gay men. Gay men and lesbian women were included from resourced and under-resourced areas. The results highlighted the impact that self-esteem and hate speech have on vulnerability to depression. A model was developed and validated which indicated that increased self-esteem can decrease vulnerability to depression and experiences of hate speech can increase vulnerability to depression.

Although South Africa has come a long way in legally protecting the rights of gay men and lesbian women, heterosexism and homophobia still prevail at ground level. If the planned adoption of the proposed Hate Speech Bill includes sexual orientation, it will lay the foundation for the implementation of effective reporting structures which may allow gay men and lesbian women to report incidents of hate speech without fear of further victimisation. It is hoped that this, as well as the increased visibility of gay men and lesbian women, will result in a decline in public expressions of prejudiced attitudes. This can reduce the vulnerability of gay men and lesbian women for depression and improve well-being.

The findings of this research can contribute to developing expertise around vulnerability to depression among gay men and lesbian women in South Africa. This expertise can be utilised in the development of effective interventions and

programmes aimed to prevent and treat depression among gay men and lesbian women. In addition, the research can be used in the lobbying for laws and policies aimed to protect the rights of gay men and lesbian women. Finally, it is hoped that the results and learnings from this research can be used by future researchers in the field to conduct research and improve on the current study.

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APPENDIX A

STRICTLY CONFIDENTIAL

OFFICE USE ONLY:

OUT RESEARCH QUESTIONNAIRE 2003

The following questionnaire forms part of a research project that is being conducted by various gay and lesbian organizations countrywide. OUT, which is a health and mental health service provider for lesbian, gay, bisexual and transgender (lgbt) people in Tshwane, is managing the project. The findings of the research will be distributed to lgbt organizations in South Africa and will be published on our website www.out.org.za by the end of June 2004.

We would like to request that you complete the following questionnaire. You do not have to participate if you do not want to. However, your participation will be highly appreciated as it will contribute to the knowledge and awareness of lgbt concerns. Your responses are important and will influence future interventions aimed at lgbt people. Your responses will remain strictly confidential and we do not need to know your name. Please be honest with your answers as this will help us to determine what the needs of lgbt people are.

The questionnaire should take about 30 to 40 minutes to complete. If you would like to know more about the research or have questions regarding the completion of the questionnaire, please contact me at 012 344 5108 during office hours. Questionnaires can be posted to P.O. Box 26197, Arcadia, 0007.

Thank you!

Louise Polders

MSc Research Student UNISA

Socio-demographics

Please provide us with the following background information so that we can make sure that we have a good cross section of the population.

Please **CIRCLE the NUMBER** next to the response that applies to you.

EXAMPLE: I am from …

South Africa 1
another African country 2
overseas 3

1. I was born……

female 1
male 2
intersex (biologically both male and female) 3

2. My preferred gender role is…

feminine 1
masculine.....2
no preference 3

3. My main sexual and emotional attraction is to people of…

the same sex 1
the opposite sex 2
the same and opposite sex.....3

4. My age is…

5. I describe myself as…

Black 1
Coloured 2
Indian 3
White.....4
Other (specify)_____5

6. My home language is (choose **ONE**)…

Afrikaans.....1
English 2
Ndebele 3
Pedi.....4
Setswana.....5
SiSwati.....6
Sesotho.....7
Tsonga.....8
Venda 9
isiXhosa 10
IsiZulu 11
Other (specify)_____12

7. Province of residence…

Eastern Cape.....1
Free State 2
Gauteng 3
Kwa-Zulu Natal 4
Limpopo 5
Mpumalanga 6
North West.....7
Northern Cape 8
Western Cape.....9

8. Area of residence (specify town/city)_____

9. I am …

employed 1
unemployed 2
a student 3
a pensioner 4
self-employed 5
Other (specify)_____6

10. If you are employed, what job do you have (be specific)_____

_____

11. I own …

	Yes	No
a. a car	1	2
b. property (house, flat, land…)	1	2

12. If you are working, what is your average monthly income before deductions?

less than R1500 1
R1501-R3000 2
R3001-R5 000 3
R5001-R10 000 4
More than R10 000.....5

13. My level of education is…

less than Grade 12 (matric) 1
Grade 12 (matric).....2
Certificate 3
Diploma.....4
Degree 5
Post-graduate 6

14.1. I am (answer ONE only!)…

single and not sexually active.....1
single and sexually active.....2
in an open relationship 3
in a monogamous (closed) relationship.....4
other (specify)_____5

_____

14.2. If you are involved in a relationship; how long have you been together with a partner?

0 to 1 month.....1
1 to 3 months.....2
3 to 6 months.....3
6 to 12 months.....4
1 to 5 years.....5
5 to 15 years.....6
More than 15 years.....7

In all of the following sections please **CIRCLE the NUMBER** next to the response that applies to you.

Social lifestyle

15. I am 'out' (open about my sexual orientation) to…

	None	Some	Most	All
a. my family	1	2	3	4
b. friends	1	2	3	4
c. work colleagues	1	2	3	4
d. other members of my community	1	2	3	4

16. When I am amongst other lgbt (lesbian, gay, bisexual, transgender) people, I am (Choose ONE only!)…

Not really known.....1
Not really part of the group.....2
Well accepted.....3
Popular socially.....4
Very popular socially.....5

17. Of all your *current friends*, how many are (to your knowledge) lgbt individuals?

All.....1
Most.....2
About half.....3
Only a few.....4
None.....5

18. What portion of your leisure time is spent socialising with lgbt people?

All.....1
Most.....2
About half.....3
Only a small portion.....4
None.....5

19. How frequently do you socialise at…?

	Never	Almost never	Sometimes	Often
a. lgbt bars or clubs.....	1	2	3	4
b. lgbt restaurants	1	2	3	4
c. lgbt religious organisations.....	1	2	3	4
d. lgbt events (film festival, pride march etc).....	1	2	3	4
e. lgbt social clubs (e.g. choir)	1	2	3	4
f. the homes of other lgbt friends	1	2	3	4
g. Other (specify)_____	1	2	3	4

20. How frequently do you socialise at heterosexual (straight) venues such as…?

	Never	Almost never	Sometimes	Often
a. Bars or clubs	1	2	3	4
b. Restaurants	1	2	3	4
c. Religious organisations	1	2	3	4
d. Social events (e.g. jazz festival)	1	2	3	4
e. Social clubs (e.g. choir, chess)	1	2	3	4
f. hair salons	1	2	3	4
g. the homes of other friends	1	2	3	4
h. Other (specify)_____	1	2	3	4

_____

_____

21. What lgbt organisations do you belong to (Please specify)? _____

_____

22. What other type of non-lgbt organisations do you belong to?

	Yes	No
a. cultural	1	2
b. political	1	2
c. social	1	2
d. environmental	1	2
e. health	1	2
f. educational	1	2
g. economic	1	2
h. other_____		

Discrimination

23. How afraid are you that any of the following things might happen to you because of your sexual orientation?

	Not afraid	A little afraid	Afraid	Very afraid
a. Verbal abuse/harassment	1	2	3	4
b. Physical abuse/ assault	1	2	3	4
c. Sexual abuse/ rape	1	2	3	4
d. Domestic violence	1	2	3	4
e. Attacks on property/possessions	1	2	3	4

24. When you were at school did you experience any of the following things because of your sexual orientation?

	Never	Almost never	Sometimes	Most of the time
a. Verbal abuse/harassment	1	2	3	4
b. Physical abuse/ assault	1	2	3	4
c. Sexual abuse/ rape	1	2	3	4
d. Negative jokes about lgbt individuals.	1	2	3	4

25. If you did experience discrimination at school because of your sexual orientation, was it from…

	Yes	No
a. teachers	1	2
b. students	1	2
c. the principal	1	2
d. Other (specify)_____		

26.1. Were lgbt issues ever raised in the classroom?

Yes.....1
No 2

26.2. If yes, was it…

positive.....1
negative.....2

26.3. If yes, was it raised …?

	Yes	No
a. as a formal topic	1	2
b. as a spontaneous remark	1	2

27. Have you personally experienced any of the following crimes in the last **24 months**?

	Never	1 to 5 times	6 to 10 times	More than 10 times
a. Verbal abuse/harassment	1	2	3	4
b. Physical abuse/ assault	1	2	3	4
c. Sexual abuse/ rape	1	2	3	4
d. Domestic violence	1	2	3	4
e. Attacks on property/possessions	1	2	3	4

If you have ONLY answered ‘never’ for question 27 (a to e) then go on to answer question 31.

28. Where did the incident/s that you experienced occur? Answer ALL questions please.

	Yes	No
a. your home	1	2
b. attacker’s home	1	2
c. main road	1	2
d. other road	1	2
e. park	1	2
f. pub/club	1	2
g. lesbian/gay venue	1	2
h. car park	1	2
i. railway station	1	2
j. bus stop	1	2
k. taxi rank	1	2
l. work	1	2
m. cruising spot	1	2
n. shops/ shopping mall	1	2
o. other (specify)_____		

29. What do you think was the motive for the most recent incident of those listed in question 27? Answer ALL questions please.

	Yes	No
a. Homophobia	1	2
b. Racism	1	2
c. Being a woman	1	2
d. Domestic	1	2
e. Religion	1	2
f. Mugging/robbery	1	2
g. HIV/ AIDS related	1	2
h. Being a foreigner	1	2
i. Political	1	2
j. Other (specify)_____		

30.1. Which of the incidents listed in question 27 did you report to the police? Answer ALL questions please!

	Yes	No	Not applicable
a. Verbal abuse/harassment	1	2	3
b. Physical abuse/ assault	1	2	3
c. Sexual abuse/ rape	1	2	3
d. Domestic violence	1	2	3
e. Attacks on property	1	2	3

30.2. If the incident/s was/were reported to the police, do you agree or disagree with these statements?

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
a. Police were helpful	1	2	3	4	5
b. Police were supportive	1	2	3	4	5
c. Police were considerate	1	2	3	4	5
d. Police were not interested	1	2	3	4	5
e. Police were easy to talk to	1	2	3	4	5
f. Police were polite	1	2	3	4	5
g. Police were rude	1	2	3	4	5
h. Police listened to me	1	2	3	4	5
i. I was satisfied with the service	1	2	3	4	5

30.3 If you did not report one or more of the incidents to the police, why not?

	Agree	Disagree
a. I felt that the report would not be taken seriously	1	2
b. I felt that the police couldn't do anything	1	2
c. I felt that the police would not understand	1	2
d. I did not want the police to know about my sexual orientation	1	2
e. I thought that the incident was not serious enough to report	1	2
f. I couldn't be bothered	1	2
g. I was drunk/ drugged	1	2
h. I had previously had poor experience with the police	1	2
i. A friend had previously had poor experience with the police	1	2
j. I was embarrassed about the incident and did not want my sexual orientation to become public knowledge	1	2
k. I was unable to get to the police station	1	2
l. I don't like the police	1	2
m. I am afraid of being abused by the police	1	2
n. These incidents happen so often that I am used to them	1	2
o. Other (specify) _____		

31. Do you think that the Criminal Justice System (Police courts, Correctional services etc) is providing for lgbt rights?

Yes	1
No	2
Not sure	3

32.1. If you have been employed at any time during the last **24 months**; have you experienced any of the following things in your workplace over the last **24 months** because of your sexual orientation?

	Never	1 to 5 times	6 to 10 times	More than 10 times
a. Verbal abuse/ harassment	1	2	3	4
b. Physical abuse/ assault	1	2	3	4
c. Sexual abuse/ rape	1	2	3	4

32.2. If you have been employed at any time during the last **24 months**; have you experienced any of the following in your workplace over the last **24 months**?

	Yes	No	Unsure
a. A refusal to allow same-sex partner benefits such as medical aid.	1	2	3
b. A refusal/ discouragement to allow same-sex partners at company events.	1	2	3
c. A lgbt friendly workplace/ employer	1	2	3
d. Diversity workshops that include sexual orientation awareness	1	2	3

	Yes	No	Unsure
33. Have you ever been refused a job on the basis of your sexual orientation?	1	2	3
34. Have you ever been given a job on the basis of your sexual orientation?	1	2	3

Health service satisfaction

35. In the last 24 months I have consulted with…

	Never	Once or twice a year	3 to 6 times a year	More than 6 times a year
a. Private doctors	1	2	3	4
b. Government doctors	1	2	3	4
c. Nurses / clinics	1	2	3	4
d. Psychologists	1	2	3	4
e. Social workers	1	2	3	4
f. Traditional healers	1	2	3	4

Other (specify)_____

_____-

_____

Please indicate the extent to which you agree/disagree with the following statements about mainstream health service providers such as doctors, nurses, psychologists and social workers.

36. In general, the doctors, nurses, psychologists or social workers that I have dealt with in the last 24 months…

	Strongly Agree	Agree	Unsure	Disagree	Strongly disagree
a. are aware of my sexual orientation	1	2	3	4	5
b. ask about my sexual orientation	1	2	3	4	5
c. openly discuss concerns related to my sexual orientation.	1	2	3	4	5
d. make me feel comfortable.	1	2	3	4	5
e. ask questions which make it seem that being heterosexual is the only normal way to be.	1	2	3	4	5
f. assume that I am heterosexual	1	2	3	4	5
g. uphold confidentiality.	1	2	3	4	5

Comments _____

_____

37. Have you ever been refused treatment in the last **24 months** because of your sexual orientation?

Yes.....1
No 2

38. Have you ever delayed seeking health related treatment in the last **24 months** because you were afraid of discrimination?

Yes.....1
No 2

39. Are there any health conditions that you have lived with and not sought help for because of fear of your sexual orientation being discovered, for example haemorrhoids, bleeding from the anus, genital infections etc.?

Yes.....1
No 2

40. Are you satisfied with the health service providers that you have used in the last 24 months?

Yes.....1
No 2

41. Have you ever consulted an lgbt organization regarding your health concerns?

Yes.....1
No 2

Health status

42. I consider my health to be …

excellent.....1
good 2
average.....3
poor.....4
very poor.....5

43. I have had a sexually transmitted infection in the last 24 months…

Yes.....1
No 2
Unsure 3

44.1. I have been tested for HIV…

Yes.....1
No 2

44.2. If yes, what is your status…?

HIV positive (infected)..... 1
HIV negative (not infected) 2
I did not fetch the results 3
I did not understand the results 4

44.3. If you have not been tested for HIV, why not…? (Answer ALL questions please!)

	Yes	No
a. I am not sexually active	1	2
b. I am too scared to get tested.	1	2
c. I do not know how to get tested.	1	2
d. I do not think I am at risk of being HIV positive	1	2
e. I have never been in a situation in which I could have contracted HIV	1	2

44.4. How many lgbt people do you know personally that are infected with HIV/AIDS? ____

Alcohol and substance use

45. I consider myself a/an…

teetotaller (never drink alcohol) 1
alcohol user 2
alcohol abuser 3
alcoholic.....4

46. I drink alcohol….

never.....1
almost never 2
twice a week or less 3
three times a week or more 4
everyday 5

47. I get drunk…

never.....1
almost never 2
twice a week or less 3
three times a week or more 4
everyday 5

48. I use recreational drugs…
(e.g. dagga, ecstasy, cocaine, poppers, mandrax…)

never 1
almost never 2
at least once a month 3
every week.....4
every day 5

49. If you take drugs, do you take them…?

	Yes	No
a. at home	1	2
b. at clubs	1	2
c. outdoor dance events	1	2
d. other (specify)_____		

50. I consider myself as someone who (choose ONE only!)

a. does not take drugs 1
b. uses drugs 2
c. abuses drugs 3
d. is dependent on drugs 4

Well-being

51. Please indicate to what extent you agree/ disagree with the following statements.

	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
a. I feel like I have to live two lives.	1	2	3	4	5
b. I feel like I do not belong.	1	2	3	4	5
c. I am in control of my life.	1	2	3	4	5
d. I often feel rejected.	1	2	3	4	5
e. I feel useless at times	1	2	3	4	5
f. I am not as happy as others seem to be.	1	2	3	4	5
g. I feel that I have a lot to be proud of	1	2	3	4	5

52. How often do you experience the following things?

	Never	Seldom	Often	Always
a. I think about committing suicide.	1	2	3	4
b. I have trouble getting to sleep or staying awake.	1	2	3	4
c. I get headaches or pains in the head.	1	2	3	4
d. I do not feel like eating or I eat too much.	1	2	3	4
e. I find it difficult to get up in the morning.	1	2	3	4

53.1. Have you ever attempted suicide?

Yes.....1
No 2

53.2. If yes, how many times have you attempted suicide? _____

Religious interests

54. My religious/spiritual preference is …

Atheist/ agnostic/no preference 1
Buddhist.....2
Christian.....3
Hindu 4
Jewish.....5
Muslim 6
Other_____7

55. Have you ever experienced discrimination by religious authorities?

Yes.....1
No 2

56. Have you ever been asked to leave your faith community because of your sexual orientation?

Yes.....1
No 2

57. Are you experiencing conflict within yourself regarding your religion and your sexual orientation?

Yes.....1
No 2

Political interests

58. I am a supporter of the…

ANC 1
DA.....2
IFP 3
PAC 4
ID 5
Other_____6

59. I think that sexual orientation is a political issue…

Yes.....1
No 2
Not sure 3

60. I…

vote.....1
don't vote.....2

61. If you vote, do you vote on the basis of your sexual orientation?

Yes.....1
No 2

62.1. Do you think that your constitutional rights are being put into practice?

Yes.....1
No 2
Not sure 3

62.2. If no, why not?

	Agree	Unsure	Disagree
a. In general people's attitudes towards lgbt people have not improved since the change in constitution	1	2	3
b. In general, people still see heterosexual (straight) people as normal and lgbt people as abnormal	1	2	3
c. People are less likely to discriminate against lgbt people now that the constitution has changed	1	2	3
d. I feel more comfortable to be open about my sexual orientation now that the constitution protects my rights.	1	2	3

Comments

63.1. Did you find this questionnaire easy to understand?

Yes.....1
No 2

63.2. Were there any questions that you did not understand?

Yes.....1
No 2

63.3. If yes, which ones (please specify)_____

64. Please add any other comments that you would like to_____

Thanks for completing the questionnaire!

APPENDIX B

An explanation of weighting

Sampling is an attempt to emulate the population being researched. Rather than conducting a census, a portion of the population is sampled. In order for the sample to correctly reflect the population, the ratios to which certain key variables are reflected in the sample have to be correct. In this study, the population was gay men and lesbian women living in Gauteng, South Africa. The key variables for sampling were age, race, sex and socio-economic status. Thus, these variables had to be correctly reflected in the sample in order for it to be representative.

In the present study, it was not viable to sample gay men and lesbian women in the proportions which reflected the general population. One reason for this is that some clusters (i.e., subcategories within the data) would have been underrepresented within the overall sample of participants in this study. Secondly, although a sample plan was drawn, the nature of convenience sampling, and the use of snowballing techniques did not allow for the final sample to be strictly according to the proportions of the plan. In order for the results to still reflect the general population, the sample had to be corrected through the use of population weights. Thus, clusters which were over-represented had to be down-weighted and those that were under-represented had to be up-weighted.

In order for weighting to be viable, it was necessary to have a sufficient number of participants in the sample to adequately represent each cluster. The quota sampling allowed for this. Weights were calculated by taking the ratio by which a particular cluster is represented in the population, and dividing it by the ratio to which that cluster was represented in the sample. Due to the inability to determine socio-economic status, this variable was excluded. Variables included for population and sample percentages were age, race and sex. For example, black

females of 16 to 24 years constituted 17.8% of the general population[11], while 15.8% were sampled for the study. The weights assigned to the data from these participants was 17.8 (population %) ÷ 15.8 (sample %) = 1.13[12]. Thus instead of these participants each being counted as one participant they were each counted as 1.13 participants. If data was missing on one of the key variables, the mean weight calculated for the clusters containing the other two variables was assigned to the participant. For example, if age was missing and the participant was a black male, the mean weight for the clusters black males 16-24 years and black males 25-40 years was assigned. Weights ranged from 0.34 to 1.52.

[11] Population ratios were determined using 2001 census data from Statistics South Africa (2004).
[12] Calculations did not round off to the nearest decimal. The explanation includes rounding in order to simplify the explanation.