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Research Report

Exploring Negative Attitudes Regarding Bisexuality

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The following research report is submitted in partial fulfilment of the requirements necessary to obtain the degree of Masters in Community-Based Counselling Psychology in the Faculty of Humanities, University of the Witwatersrand, Johannesburg, 2014

Declaration

The author hereby declares that this research report is his own original work entirely, and it has never been submitted as part of any other degree or examination.

_____ _____

Gregory Eccles Date

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Table of Contents

Table of Contents 3

List of Figures and Tables 7

Initialisms and Acronyms 8

Abstract 9

Chapter 1: Introduction 11

Background to the Study 11

Aims and Objectives of the Study 11

Rationale 12

Epidemiology 14

Attitudes Towards Bisexuality 16

Existing studies on attitudes towards bisexuality, tolerance of ambiguity, social conservatism and sexual orientation congruency. 16

Theoretical and Practical Value of the Study 17

Overview of the Research Paper 18

Chapter 2: Theoretical Approaches to Bisexuality 19

Introduction 19

Understanding Sexuality and Bisexuality 19

Queer theory and bisexuality 23

Further conceptualisations of bisexuality 25

“Bisexual” Label Adherence 27

The Position of Bisexuality Amongst Sexual Labels 30

Internalized vs Externalised Biphobia 31

Prejudice Towards the Bisexuality Label 32

Factors Affecting Biphobia 36

Tolerance of ambiguity 36

Social Conservatism. 38

Gender, age and race 40

Bisexuality within Academia 40

Chapter 3: Methodology 42

Introduction 42

Research Questions and Hypotheses 42

Research questions 42

Research hypotheses 43

Research design 43

Sample and Sampling 44

Procedures 49

Instruments 50

Attitudes Regarding Bisexuality Scale 50

Klein Sexual Orientation Grid (KSOG) 52

Tolerance of Ambiguity Scale 55

Social Conservatism Scale 56

Demographic questions 57

Ethical Considerations 57

Conclusion 59

Chapter 4: Results 60

Introduction 60

Descriptive Statistics 60

Attitudes Regarding Bisexuality Scale. 60

Social Conservatism and Tolerance of Ambiguity. 61

Klein Sexual Orientation Grid. 63

Relationships Between Variables 68

Inter-variable relationships. 68

Multiple Linear Regression results 74

Demographic variables. 77

Conclusion 80

Chapter 5: Discussion 81

Introduction 81

Discussion of Results 81

Research question 1 81

Research question 2 84

Research question 3 85

Research question 4 87

Experience with bisexuality 90

Demographic statistics 91
Sample 93
Synopsis 93
Limitations of the Study 97
Measuring sexual orientation 97
Sample 99
Statistics. 100
Personal 101
Strengths of the Study 101
Measuring sexual orientation 101
Sample 102
Demographic options 102
Proposed Future Research 102
Recommendations for Addressing Attitudes Towards Bisexuality 103
Conclusion 105
Reference List 106
Appendix A: Ethics Clearance Certificate 120
Appendix B: Participant Information Sheet 121
Appendix C: Demographics Questionnaire 124
Appendix D: 12 Item Social Conservatism Scale 125
Appendix E: 12 Item Tolerance of Ambiguity Scale 126

Appendix F: The Klein Sexual Orientation Grid 127

List of Figures and Tables

Table 1: Frequencies of the demographic of the sample ……..…….46

Table 2: Frequencies of the sexual identity of the sample …….…..…..48

Table 3: Descriptive Statistics for Age ……..…48

Table 4: Descriptive Statistics for Subscales of ARBS …….…...60

Table 5: Descriptive Statistics for Social Conservatism and Tolerance of Ambiguity Scale ……..…61

Table 6: Descriptive Statistics for Subscales of KSOG …….……...63

Table 7: Descriptive Statistics for Sexual Identity Incongruence Scores ..……..….65

Table 8: Descriptive Statistics for Absolute Distance from Bisexuality of the KSOG Scores …….……...66

Table 9: Correlations Between the Dichotomized Sexual Identity Incongruence Scores, and Social Conservatism, Tolerance of Ambiguity, ARBS: Stability, and ARBS: Tolerance …..…….……...68

Table 10: Correlations Between ARBS and the Dichotomized Absolute Distance from Bisexuality of the KSOG Scores ……..71

Table 11: Correlations Between ARBS: Tolerance, ARBS: Stability, Tolerance of Ambiguity, and Social Conservatism …...…….72

Table 12: Significance and Standardised Beta Values for Multiple Linear Regression on ARBS: Stability Factors ….……..…..75

Table 13: Significance and Standardised Beta Values for Multiple Linear Regression on ARBS: Tolerance Factors …….....76

Table 14: Descriptive Statistics: Means and Standard Deviations of ARBS Scores by

Race ……..……..77

Table 15: Race ANOVA for ARBS ……..…….78

Table 16: Descriptive Statistics: Descriptive Statistics: Means and Standard

Deviations of ARBS Scores by Gender ……..79

Table 17: Gender ANOVA for ARBS ……..……..79

Initialisms and Acronyms

LGBTQIAA – Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual and Allies

KSOG – Klein Sexual Orientation Grid scale

ARBS – Attitudes Regarding Bisexuality Scale

ToA – Tolerance of Ambiguity scale

Abstract

Research focusing on sexual minority groups has historically focused almost exclusively on homosexuality, leaving a relative void in the body of work focusing on bisexuality. While prejudices towards homosexual minorities have been researched extensively, such research either excludes bisexuality, or incorporates it into homosexuality without considering differences between the concepts. This research paper looked to explore factors influencing negative attitudes regarding bisexuality, specifically incorporating familiar and less familiar research variables.

Tolerance of ambiguity and social conservatism are both factors with well-established ties to homophobia. While their conceptual link to biphobia would seem obvious, only a limited number of studies have been conducted to connect these factors to attitudes regarding bisexuality, and thus further research examining this trend is warranted.

In this study, an attempt was made to build upon the work of Hoang, Holloway, and Mendoza, (2011), who conducted a study examining the effect of bisexual identity congruence on attitudes regarding bisexuality. In addition to tolerance of ambiguity and social conservatism, bisexual identity congruence was also examined as a possible contributor towards attitudes regarding bisexuality. Conducting this examination in tandem with previously correlated values was hypothesized to provide an indication of the relative strength of the effect of bisexual identity congruence on attitudes regarding bisexuality.

A survey of 133 mixed heterosexual and non-heterosexual students was conducted, making use of instruments to measure attitudes regarding bisexuality, sexual orientation facets, tolerance of ambiguity and social conservatism. These results were then analysed statistically through correlation and multiple linear regression.

The findings of the study indicated a potential positive correlation between increased sexual identity incongruence and decreased biphobia, in contrast to the initially hypothesized opposite trend. Three specific areas of sexual identity congruence appeared to be most influential towards attitudes regarding bisexuality, namely incongruence between sexual identity and emotional preference, sexual behaviour and sexual fantasy.

Tolerance of ambiguity and social conservatism both demonstrated significant but weak correlations with aspects of attitudes regarding bisexuality, in line with similar studies linking the two to homophobia and biphobia. Social conservatism was also shown to be the strongest independent contributor towards attitudes regarding bisexuality, with tolerance of ambiguity ranking thereafter.

Beyond the original research questions, the data also seemed to demonstrate a tendency for people who have personal experiences with bisexuality to display less negative attitudes regarding bisexuality. Some indication of a racial difference in attitudes regarding bisexuality, as white students were shown to be statistically more likely to hold more positive attitudes towards bisexuality.

Chapter 1: Introduction

Background to the Study

As the only African country which provides constitutional protection of the rights of individuals on the basis of their sexual orientation, South Africa holds a de facto status as the leader of Africa in terms of Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual and Allied (LGBTQIAA) rights. Despite this relatively progressive attitude towards the relevant legislative protection of this minority group, this liberal attitude is contrasted strongly with prevalent hate crimes towards sexual minority groups.

Although numerous studies have been conducted to investigate the potential contributors to homophobic attitudes, there is a relative absence of similar studies exploring similar prejudice towards bisexuals (biphobia), particularly within the South African context. Understanding the contributors towards prejudicial attitudes holds the promise of providing clues to the appropriate preventative and remedial behaviours necessary to expand the protection of sexual minority groups from a constitutional to a social level.

Aims and Objectives of the Study

This study aims to explore the potential contributing factors to negative attitudes towards bisexuality. It examines the relationship between this and three other broad factors - social conservatism, tolerance of ambiguity, and incongruence between sexual identity and other elements of sexual orientation.

The concept of attitudes towards bisexuality is split into two related but distinct factors - the perceived stability of bisexuality as a sexual identity, and the moral acceptability of bisexuality.

Sexual orientation is explored using the Klein Sexual Orientation Grid, which provides a number of interrelated dimensions of sexual orientation - sexual identity, sexual behaviour, sexual fantasy, sexual attraction, and emotional attraction. The differences between the sexual identity dimension on the one hand, and each of the other dimensions of sexual orientation on the other, are used to explore the effect of dissonance within a person's sexual orientation and their attitudes towards bisexuals.

Beyond this aspect of the study, tolerance of ambiguity and social conservatism are also explored in their relation to attitudes towards bisexuality. These variables have been compared to prejudicial attitudes in numerous studies, and so their status in this research is useful in two ways: first, this study can serve to strengthen the depth of literature available on the relationship between tolerance of ambiguity and social conservatism, and negative attitudes towards a sexual minority group; second, their comparison can serve as a reference point for the strength of interaction between sexual orientation dissonance and negative attitudes towards bisexuals.

Rationale

Research on prejudice towards the LGBTQIAA community has predominantly focused on prejudice towards homosexuals (Boehmer, 2002). When research has included issues of bisexuality, it has often done so in a very offhand manner, lumping bisexual men and women with gay and lesbian women (Rust, 2002). Although the discriminatory issues faced by both groups of people share numerous similarities, there are distinct circumstances unique to the bisexual community that need to be addressed. The bisexual side of psychological research, although addressed to an extent, is often ignored completely by academics (Rust, 2002).

Homophobia is by now a well-known and steadily decreasing phenomenon. It has a counterpart in the bisexual community in biphobia, but although they share many similar

attributes, there are also major differences between the two (Eliason, 1997). Homophobia is an attitude directed at the LGBTQIAA community in general by the larger heterosexual majority, whereas biphobia is experienced by bisexuals as coming from both the heterosexual and homosexual communities.

Popular myths such as “bisexuals are gay people who are still in the closet” (Morgenstern, 2004, p. 47) and “bisexuals are indecisive, confused neurotics who will never be sexually satisfied” (Morgenstern, 2004, p. 48) have, amongst others, contributed greatly towards the relative invisibility of the bisexual community. Bisexual individuals often feel pressured to accept a heterosexual or homosexual orientation label, either to match that of their current relationship, or simply to fit in with societal expectations of a hetero-homo dichotomy (Garnets, 2002).

In dealing with these myths and prejudiced attitudes throughout society, it is important to understand the driving force involved in their creation. Although there are a number of theories involving intergroup conflict and stereotype formation (realistic conflict theory, for example), a fair amount of research has been done concerning homophobia specifically. Some of the findings support Freud's concept of Reaction Formation, in that an internally suppressed thought or feeling is expressed by hostility towards external symbols thereof (Adams, Wright, & Lohr, 1996).

A potential assumption behind this study is thus that a similar process of reaction formation is present in individuals exhibiting biphobia, and that it is directly related to the degree to which they are suppressing their own sexuality. This study attempts to support this hypothesis by measuring dissonance within individual sexual orientation, and biphobia, and examining the possible relationship between the two. This concept is similar to, but not equated with, reaction formation, and thus the former is only mentioned in brief.

Epidemiology. South Africa was one of the first countries in the world to legalise same-sex marriage in 2006 (Currier, 2007), and contains a clause within its constitution which prohibits discrimination on the basis of sexual orientation (Wells & Polders, 2006). Despite the constitutional protections and liberal legal attitudes towards sexual minority groups in South Africa however, the legal status and daily realities of these groups hold stark contrasts in a country where prejudiced attitudes of many forms still abound.

Despite the protections afforded to sexual minority groups in South Africa, research suggests that homophobic victimisation is a common part of the South African landscape (Nel & Judge, 2008). South Africa presents as a country with highly patriarchal traditional beliefs within a variety of cultures. When the associated gender roles within these types of systems interact with increased levels of sexual orientation disclosure and individual integration into sexual minority groups, higher levels of victimisation based on sexual minority prejudice become noticeable (Nel & Judge, 2008).

Community and tribal leaders in a number of African countries, including South Africa, have referred to so-called "deviant" sexual orientations as "un-African," with a number of African countries instigating legal prejudice against these groups (Stobie, 2003). Although the attitudes of these leaders may have a low impact on the LGBTQIAA community when held at an individual level amongst these persons, the effect of these beliefs being advocated by community leaders further contributes towards widespread prejudice against sexual minority groups.

The assumption of heterosexuality as the social norm is apparent at both an individual and institutional level (Buttaro & Battle, 2012), and is a natural consequence of a society which views the heterosexual couple as the basis of a family. This heterosexism refers to heterosexuality being viewed as the default sexual orientation, where individuals who fall outside of a heterosexual orientation may have prejudice directed towards them, as society

potentially views heterosexuality as a superior sexual orientation. Francis and Msibi (2011) describe the South African situation with the phrase “rampant homophobia,” referring to widespread social discrimination against sexual minority groups (including but not limited to homosexuals). Considered within this context, addressing the causes of heterosexism, homophobia and biphobia would seem to be of crucial importance.

Determining the number of people affected by negative attitudes towards bisexuality is difficult, as counting the precise number of non-heterosexual individuals within the broader population of South Africa (or any other country), let alone a world-wide census, is fraught with a number of difficulties.

As the identification of sexual minority groups relies primarily on self-report measures, the accuracy of any such data is likely to be marred by the hesitancy of many sexual minority group members to identify themselves publicly. Depending on the legal status of non-heterosexual orientations in a particular country, as well as social climate factors which either facilitate or impede self-identification, census rates are likely to present a lower population number of LGBTQIAA individuals than what may actually be present within the broader population group. Regardless of the population percentage of South Africa that falls into sexual minority groups, however, there are a few factors operating in favour of sexual minority groups in South Africa in the legal sphere, and a large number of factors counting against these groups on a community and social level.

The South African constitution clearly prohibits discrimination based on the sexual orientation of the individual, and yet members of sexual minority groups continue to experience prejudice based on this within social and occupational spheres. Sexual minority groups are often the victims of bullying at a social level, with South African media having reported hate crimes based on sexual orientation prejudice, such as harassment, murder, and “corrective rape.”

Attitudes Towards Bisexuality

Bisexuality is an often ignored, denied and belittled orientation within the spectrum of sexual identity labels. Social myths abound, suggesting bold claims such as "bisexuals are disease-ridden sluts and/or greedy nymphomaniacs" (Morgenstern, 2004, p. 47), "indecisive, confused neurotics who will never be sexually satisfied" (Morgenstern, 2004, p. 48) or "bisexual women are traitors to the Lesbian Nation" (Barker, Yockney, Richards, Jones, Bowes-Catton, & Plowman, 2012; Morgenstern, 2012, p. 48), or more subtly insulting comments claiming bisexuals to be "gay people who are still in the closet with internalized homophobia and/or going through a phase" (Morgenstern, 2012, p. 47; See & Hunt, 2011).

People who identify as bisexual are at risk of being the recipients of greater negative attitudes from heterosexual communities than their homosexual counterparts. Beyond the traditional problems that heterosexuals may associate with gay, lesbian and bisexual groups, bisexuals have a number of stereotyped associations surrounding their identity, such as (further) increased promiscuity, non-monogamy, and being characterized as vectors of HIV and STD transmission (Morrison, Harrington, & McDermott, 2010).

Existing studies on attitudes towards bisexuality, tolerance of ambiguity, social conservatism and sexual orientation congruency. Hoang, Holloway, and Mendoza (2011) conducted a study which demonstrated a significant relationship between bisexual identity congruence and internalized biphobia. They measured bisexual identity congruence as the degree to which an individual's sexual orientation characteristics (such as their patterns of sexual attraction) are aligned with their overall sexual orientation (which took all aspects of their sexual orientation into account). As internalized heterosexism stems from social values which are taken on by the individual, the relationship between sexual identity congruence and general attitudes towards bisexuals appears to be a logical area to explore further.

In a study of the effects of gender on attitudes towards bisexuals, the authors speculated that the differences between attitudes towards bisexuality as demonstrated by separate genders may potentially be accounted for by known gendered differences in tolerance for ambiguity (Yost & Thomas, 2012). Tolerance of ambiguity therefore presents an attractive variable to study in the exploration of factors influencing negative attitudes towards bisexuality.

Finally, Durrheim (1998) conducted an investigation into the relationship between conservatism and tolerance of ambiguity. He suggests that individuals holding beliefs which go against the social norm are expected to express higher levels of ambiguity tolerance. Thus those individuals who deviate from conservative attitudes towards bisexuality (and are potentially less socially conservative) are more likely to display high tolerance of ambiguity, and potentially more favourable attitudes towards bisexuals. It appears that social conservatism may link to both tolerance of ambiguity and attitudes towards bisexuality, presenting a further variable of high interest value.

Theoretical and Practical Value of the Study

Hoang, Holloway, and Mendoza (2011) noted in their study on bisexual identity congruence that "bisexual women and men have historically been pathologized, left out, or clumped together with lesbians and gay men in social and psychological research" (p. 37). There is a clear absence of research focused exclusively on bisexual men and women, relative to that pertaining to homosexual groups.

South Africa's legal protection of sexual minorities is strongly contrasted by highly conservative and often hostile attitudes towards sexual minority groups. These conservative attitudes are displayed through statistics such as the 61% "No" against the social acceptance of homosexuality in South Africa, as demonstrated through the Pew Research Center survey

of 39 countries (Kohut, 2013). This survey was conducted with 815 South African adults in face to face interviews, across five language groups. In addition to this these statistics, hate crimes directed at sexual minorities further demonstrate social hostility towards these groups.

The value of an increased understanding of factors that influence negative attitudes towards bisexuality is thus evident in the face of pervasive prejudice directed towards sexual minority groups in South Africa. Further understanding of these factors may contribute towards educational and community initiatives that could develop more accepting social attitudes. This would help South Africa to set a true example to the African continent as a true protector of human rights amongst sexual minority groups.

Overview of the Research Paper

Chapter two explores past and present theoretical understandings of bisexuality, the social position of bisexuality amidst more dominant sexual orientation groups, and some of the factors that affect attitudes regarding bisexuality. Chapter three provides an indication of the research methodology employed, including the relevant research questions, the applied research design and procedures employed, the instrumentation pursuant to this study, and the ethical considerations of the project. Chapter four and five present the statistical results gathered from the survey conducted, and explore what implications this data has on the initial research questions, as well as any other serendipitous findings. The strengths and limitations of the study are also laid out, along with subsequent recommendations for future research endeavours focusing on factors affecting attitudes regarding bisexuality.

Chapter 2: Theoretical Approaches to Bisexuality

Introduction

This chapter attempts to provide a background to the study based on previous literature in related fields of study. An understanding of sexuality and bisexuality is initially explored, looking into potential theoretical understandings of the concept. From this point, the various forms of social difficulties around bisexuality are discussed, including prejudice and pressures to conform to social norms. A discussion on tolerance of ambiguity and social conservatism is provided to ground the later investigation of their effect on attitudes towards bisexuality, and the chapter concludes with an inquiry on the position of bisexuality within academic research.

Understanding Sexuality and Bisexuality

"Bisexuality" as a term began as a word more akin to hermaphroditism used in biological descriptions, and later evolved into an intermingling of masculine and feminine traits of personality in an androgynous type of person (Klesse, 2011). A newer and more socially persistent definition of bisexuality constructs it as a middle ground sexual orientation between heterosexuality and homosexuality, wherein an individual is said to like both males and females. In this way, the term "bisexual" may be misleading, in that the term has both tried to escape the classic binary system of male/female, and yet its very name points towards this socially created dualism.

Despite clear indications of what bisexuality is not, a precise definition remains elusive. Is a bisexual someone who has sexual relations with both men and women? Or is emotional attraction to, or sexual fantasies of, more than one gender enough to classify someone as bisexual? Is a person who is attracted to one gender 1% of the time and another gender 99% of the time bisexual? And how does sexual identity tie in to sexual orientation?

Some psychological researchers argue that sexuality is a dichotomous construct, consisting of polar opposites of hetero- and homosexual (Barker & Langdridge, 2008). They argue that this dichotomy suggests an inherently biological rather than environmental influence on sexual orientation. This is contrary to evolutionary theory understandings of sexuality, which emphasize diversity and variation (McHugh, 2009) – "It is a fundamental of taxonomy that nature rarely deals with discrete categories" (Kinsey, Pomeroy, & Martin, 1948, p. 897).

A theoretical understanding of bisexuality thus demands either a continuum between the polar opposites of sexual orientation within which bisexuality is subsumed, or the outright rejection of this dichotomy in favour of a broader perspective on the limits of categories of sexual orientation. Although a broader perspective on sexual orientation may appear at first glance to be the preferable system of understanding, it also presents two specific challenges which may favour the continuum approach.

The first problem is the way sexual orientation is understood socially. Although common understandings are not true by virtue of their popular belief, they nevertheless should be considered when conceptualizing something as personal as sexual orientation. Social categorisations of sexual orientation appear to be just that – clearly defined categories which delimit which people fall within which predefined groups. Thus a heterosexual, homosexual or bisexual person is not allowed to deviate from stereotypically defined activities without threatening their categorization.

A more nuanced understanding of sexuality might preclude definitive boxes to enclose groups of people within, but this clearly does not match with popular conceptions of, and thus common personal identification with, sexual orientation. If research were to deviate from the categorical approach to understanding sexuality, it would likely be out of touch with social perceptions of the phenomenon.

The second problem presented by less categorical understandings of sexuality lies in the difficulty in operationalizing such concepts. Firm boundaries between sexual orientation groups create easily delineated research groups and straightforward statistics in terms of drawing comparisons between groups. Understanding sexual orientation in terms of a dichotomy with an intermediary continuum addresses both of these concerns to an extent, but not without its own complications.

This can lead to a number of complex questions around this broader categorization of sexuality. If homosexuality and heterosexuality are the polar extremes of a sexual orientation continuum, at what point do they end and give way to bisexuality? Would a homosexual who has had one sexual encounter with the opposite sex then be considered bisexual? Or a heterosexual with sexual fantasies involving the same sex still be heterosexual? And if one of these individuals chooses to identify as homosexual or heterosexual, despite contradictory fantasies / relations / emotions, which label is then applied?

Sexual orientation is approached in this research report from the perspective of a continuum. Bisexuality appears to be by far the bigger category for individuals to be included in, as heterosexuality and homosexuality seem by definition to only make room for interaction with one gender each. Arbitrary distinctions can be made about how much "leeway" is given to homosexuality and heterosexuality in terms of deviating from same-sex- or opposite-sex-only behaviour or cognitions. The problem with this approach, however, is that operationalizing such an arbitrary cut-off point presents both ethical and practical problems – who defines the exact point of transition, and how do we deal with the myriad of ways in which sexual orientation can be expressed?

Kinsey, Pomeroy and Martin (1948) contribute an important initial understanding to this continuum:

> "...the heterosexuality or homosexuality of many individuals is not an all-or-none proposition. It is true that there are persons in the population whose histories are exclusively heterosexual, both in regard to their overt experience [behaviour] and in regard to their psychic reactions [cognitions]. And there are individuals in the population whose histories are exclusively homo- sexual, both in experience and in psychic reactions. But the record also shows that there is a considerable portion of the population whose members have combined, within their individual histories, both homosexual and heterosexual experience and/or psychic responses. There are some whose heterosexual experiences predominate, there are some whose homosexual experiences predominate, there are some who have had quite equal amounts of both types of experience..." (p. 897).

In this quote, the researchers are beginning the path to understanding that homosexuality and heterosexuality, as exclusive categories, encompass too narrow a focus to include the vast majority of people. Although there are some individuals who are exclusively homosexual or heterosexual, many have experience on either side of the dichotomy, whether as "overt experience" or as "psychic reactions" (Kinsey, Pomeroy & Martin, 1948). Although this is the conceptual understanding of how sexual orientation applies to a variety of individuals, ultimately their personal decisions around identifying with specific labels are also respected on an individual basis, as it could be considered insulting at this level to contradict a person's chosen sexual identity.

The distinction between bisexuality on the one hand, and homosexuality and heterosexuality on the other, has been discussed in an academic context for some time. Even Freud makes mention of bisexuality, although his conceptualisation thereof was as a

transitory state we are born into, from which we later mature into either a homosexual or heterosexual state (Carey, 2005). This rejection of bisexuality as a stable sexual orientation, in favour of the adoption of a sexual orientation duality as the social norm, has been prevalent throughout academics and society.

Freud's (1905) view on bisexuality lends an image of unrestrained and immature sexuality, contributing towards a negative stereotype of bisexuality. The academic view of the field has clearly evolved from this over time, although bisexuality as it stands seems to lack a theoretical perspective of its own – traditional gay and lesbian research endeavours have brushed over it, and queer theory has all but ignored it, despite attempting to ascend the purportedly limited views of traditional theories. Part of this problem may lie in the difficulty of defining bisexuality.

Queer theory and bisexuality. In looking for a theoretical understanding of bisexuality, queer theory has perhaps come closest to embracing the challenges bisexuality places upon traditional understandings of sexuality. Queer theory is a re-conceptualization of traditional theoretical views of sexual orientation that critiques previous binary understandings, and introduces a more bisexually relevant perspective. It has attempted to address this limited understanding of sexuality. It confronts the duality of sexual identity categories by challenging the underlying preconceptions of western understandings of sexuality (Barker & Langdridge, 2008). Queer theory represents a shift in theoretical background, from previous political discourses to place bisexuality as a legitimate sexual identity, to a reinvention of the socially-pressured dichotomous stance (Barker & Langdridge, 2008).

The term “queer” itself has been used as a derogatory term for people of homosexual or effeminate habits, as an activist term denoting the rights of LGBTQIAA groups, and as a label for non-heterosexual individuals to use in place of other more specific and highly

stigmatised labels (Callis, 2009). In academia, it is now perhaps best associated with queer theory itself.

The nature of queer theory is in dealing with sexuality in relation to its social norm, which has been seen as a dichotomous variable for many years. Queer theory is in the perfect position to deal with bisexuality as an extreme of "deviant" sexuality, as bisexuality splits so far from the binary default. However queer theorists do not settle at only exploring concepts outside the range of normative sexuality, but actively seek to challenge these norms, in a way that could include bisexuality (and a number of other sexual orientation expressions) as normal positions (Callis, 2009). Heterosexuality and homosexuality are labels best applied to certain historical contexts (Callis, 2009), and thus queer theory aims to weaken the standing of sexual orientation labels, which can be restrictive forces to those who carry them.

The most influential works affecting queer theory (influenced by authors such as Michel Foucault, Judith Butler, Diana Fuss and Eve Sedgwick), however, have all seemingly ignored bisexuality, perhaps to the detriment of queer theory itself (Callis, 2009). There are also a number of other criticisms against Queer theory – its overemphasis on sexuality as the most important element of identity; its creation of a new "queer vs normal" binary; positioning of heterosexuals as the "dominant norm"; and its underplaying the value of gay and lesbian research (Callis, 2009).

Mentions of bisexual identities and bisexuality have been mostly absent from works of queer theory, except as add-ons to groupings of gay, lesbian and bisexual people, or as written about by bisexual authors (Callis, 2009). A number of reasons for this have been suggested, including that queer theorists are unaware of bisexual scholarship, or that bisexuality is considered part of the binary system of homo-heterosexuality, which is already being deconstructed by queer theory (Callis, 2009). Nevertheless, it would seem that the

inclusion of bisexual research into queer theory discussions would only serve to strengthen both spheres of knowledge.

Judith Butler discussed the interconnection between sex, gender and sexuality, and how social constructionists have artificially separated these as discrete categories of human existence (Callis, 2009). Butler believed that each of these categories are identity labels that are not given to individuals, but are rather enacted and re-enacted constantly.

According to this interconnection between gender and sexuality, for a man or woman to be homosexual creates gender trouble, as femininity and masculinity are traditionally tied to specific forms of sexuality. Thus the stereotype of typically masculine lesbian women and feminine gay men is born, so as to quell this gender trouble. Bisexuality therefore serves as a more potent disruption to this social construction, as gender cannot be completely tied with sex object choice. Either their gender is constantly changing, or their gender does not match their sexuality (Callis, 2009). This form of gender trouble thus cannot be dismissed as easily, unless bisexuality itself is questioned as an identity (which is often the case).

Further conceptualisations of bisexuality. The works of Alfred Kinsey and Fritz Klein are perhaps some of the best known examples of psychological research on bisexuality. The Kinsey Scale and the Klein Sexual Orientation Grid are possibly some of the most prominent examples of advancements in the field of bisexuality. The conceptual bases of these scales rely on a definition of bisexuality as a middle point between the polar extremes of homosexuality and heterosexuality, which was both beneficial for research purposes in simplifying the concept, and extremely problematic with regards to socially practised definitions of bisexuality which struggle against this same duality.

Further conceptualizations of bisexuality place it as “a desire that does not limit itself to the eroticization of one gender” (Klesse, 2011), which represents a further step away from the

homo-hetero dichotomy. Due to the constant shifting of meaning of this term in recent decades, there is still a large degree of confusion and ambiguity present in the use of the term, especially in everyday social situations.

Cultural factors further stymie the clarification of bisexuality as a category, as the term is by no means a universal concept. Western researchers and activists have defined bisexuality within the confines of sexual practice, sexual potential (expressed in desires) and sexual self-identities (Klesse, 2011). This last criterion is perhaps most important in social spheres, as it is considered most unwelcome in the GLBT community to apply a sexual identity label to someone who identifies with another. For example, a man may identify as gay even though he has had sexual relations with men and women in the past. For the purposes of research, however, it is not always possible to allow for these personal preferences while still maintaining reliable statistical findings, but this runs the risk of angering the same group whose participation in further research is sorely needed.

The history of bisexual politics is punctuated by both an identity establishment movement and a resistance to the dichotomous basis of sexuality. Thus bisexuality can be understood both as an area between the polar extremes of homosexuality and heterosexuality, and as a sexual orientation independent of gender structures (Barker & Langdridge, 2008). From this it is understandable that a certain amount of confusion exists as to the definition of bisexuality. Due to the ambiguity of the term “bisexual”, it is misconstrued by some to refer to “both men and women,” and thus is substituted by parts of the LGBTQIAA community with more etymologically clear terms such as “pansexual” and “omnisexual.” It is also not uncommon for people within LGBTQIAA groups to create an artificial distinction between bisexuality and pan/omnisexuality, believing (erroneously) that the former represents a sexual orientation based on a dichotomous gender distinction (as rooted in the word *bi*sexual), while the latter is a sexual orientation independent of this socially dictated dichotomy.

Although the word is constructed out of a prefix referring to a duality, the root of the word bisexuality is derived from Darwinian studies of hermaphrodism (in which he referred to hermaphrodism as bisexuality), and later extrapolations on this in the early 1900s to account for variations in sexual orientation (Erickson-Schroth & Mitchell, 2009). The word has since evolved into the modern-day understandings of a sexuality which is not based on a specific gender preference, but instead based on a preference for both same-gender and other-gender persons (Barker, Richards, Jones, Bowes-Catton, Plowman, Yockney, & Morgan, 2012).

"Bisexual" Label Adherence

In amongst this label confusion and societal pressure towards a sexual dichotomy, it is no wonder that it can be difficult for anyone who has thoughts or feelings outside of the expected homosexual-heterosexual range to find a label to identify that fits exactly with who they are. Although many have chosen to embrace labels such as bisexual, pansexual or omnisexual, still many more are no doubt trapped within other classifications that they may not necessarily completely identify with. This discord between the expectations of an unsuited identity label, and the thoughts, feelings and behaviour that come naturally to these individuals can have a number of effects, as described in cognitive dissonance theory.

Cognitive dissonance theory focuses on co-occurring thought patterns which stand in contradiction to each other, and predicts that this occurrence will result in psychological distress in the individual (Schick, Rosenberger, Herbenick, Calabrese, & Reece, 2012). As an individual seeks to redress this discord, they may attempt to alter either their cognitions on one of the two subjects in question, or minimize the importance of one or both of the thought patterns.

In applying this theory to bisexuality, a number of parameters of sexual orientation require significant consideration. Although a sexual orientation (such as bisexuality) is understood to

pertain to a generalized attraction to one or more (or no particular) genders, researchers such as Klein have described a number of potential component sub-factors of sexual orientation: sexual behaviour, sexual attraction, emotional preference, sexual identity, sexual fantasy, political identity, social preference and lifestyle preference. These separate facets of sexual orientation provide a number of opportunities for cognitive dissonance to occur within the construct of sexual orientation itself.

As an example, one can imagine a self-identified homosexual man who maintains sexual behaviour with men and women, fantasizes exclusively about men, holds a heterosexual political identity, and is sexually attracted to a large proportion of men and a small number of women. This presents a picture of an individual potentially rife with cognitive dissonance in attempting to reconcile each of these elements with the overarching sexual orientation itself, as well as with separate constituents of the whole.

A number of explanations exist for the existence of mismatches between these subsets of sexual orientation. As examples, sexual behaviour may not match sexual identity (due to social incentives to identify or behave in certain ways) or sexual behaviour (for reasons other than personal desire (e.g. financial compensation), or a mismatch may be in protest of externally enforced identity constraints (Schick, Rosenberger, Herbenick, Calabrese, & Reece, 2012).

Within a predominantly heteronormative society, a heterosexual sexual orientation is often assumed in the absence of any obvious indications otherwise. Thus many individuals who engage in opposite sex behaviours may be presupposed to be heterosexual, when any number of other potential sexual identities may be held by the individual. Furthermore, the individual is incentivized to outwardly subscribe to that identity which carries the least stigma or the most social benefit, once again indicating a heterosexual and even homosexual identity in preference to a bisexual identity.

An internal identification with a mismatched identity may result from the forces of cognitive dissonance. The individual either avoids expressly identifying with a particular identity, or chooses one which is seen to be more congruent with one of the previously dissonant factors in their sexual orientation. Social descriptors of appropriate forms of behaviour for various sexual identities may also play heavily into this discord, placing pressure on the individual who has accepted a non-bisexual sexual identity to then accept prescriptions running contrary to their natural inclinations.

Studies show a disconnect between personal sexual identity choices, and the expected sexual desires and behaviours associated with these identities within an individual (Hoang, Holloway, & Mendoza, 2011). Part of this disconnect can perhaps be attributed to the difficulties inherent in developing a non-heterosexual identity, and in particular a bisexual identity. Models of gay and lesbian identity development denote a sequence of events including awareness of same-gender feelings, same-gender relationship experience, self-acceptance and subsequent disclosure of gay or lesbian identity, and ultimate integration of gay or lesbian identity into overall identity constructs (Sophie, 1986, as cited in Hoang, Holloway, & Mendoza, 2011).

Bisexual identity development models depict a contrasting and more complex path of identifying as a bisexual: the first few steps involve a similar process to homosexual identity development models, while including same- and opposite-gender components (Diamond, 2008, as cited in Hoang, Holloway, & Mendoza, 2011). After disclosure, however, the process continues with instability of self-identification due to prejudice, lack of social support, and maintaining monogamous (and therefore single-gender) relationships.

This added complexity in following a path towards identification as a bisexual is perhaps one of many layers inhibiting individuals from otherwise self-identifying as a sexual identity that more closely matches their lived experiences. With subsequent lower numbers of

individuals identifying as bisexual, despite this identity potentially matching their lifestyle more closely, the relevant statistics concerning this population subset become that much more inaccurate.

The Position of Bisexuality Amongst Sexual Labels

South Africa is not a country new to discrimination, as the long history of Apartheid within this country demonstrates. In examining the course of prejudice against sexual minority groups, some parallels to racism can also be drawn, which illuminate some of the social patterns employed in discriminatory practices.

Racism in Apartheid South Africa was often seen as working accordance with the one drop theory of race, wherein anyone with even a portion of black genetic ancestry was viewed as black themselves by the dominant white culture (Davis, 1991, as cited in Anderson & Adams, 2011). In a similar way to that in which racial identity was once marred by the one drop theory of race, perspectives on sexual orientation have adopted a similar viewpoint.

The sexual orientation of an individual who identifies themselves as a member of the dominant sexual orientation category (heterosexuality) may be deemed altered by their community when they are "contaminated" with sexual behaviour falling outside of their previous sexual orientation. Traditionally this has meant that such individuals would be labelled homosexual after having had sexual relations with someone of the same gender (Anderson & Adams, 2011). Both of these scenarios demonstrate the clear inadequacy inherent in conservative labels to accurately describe any of these individuals – technically "white," "black," "homosexual" and "heterosexual" are exclusive categories which by their nature exclude any deviation from their totality. Any deviation from their extreme groupings should rightly be considered mixed-race or bisexual by definition, and yet this is rarely the case.

The primary dominance and elitism of heterosexuality as a sexual orientation label is demonstrated by the irreversibility of this phenomenon – one drop of heterosexuality in a homosexual life appears to make no difference to the labelling of these individuals (Anderson & Adams, 2011). Although the dominance of heterosexuality is undeniable, it would appear that homosexuality also holds a secondary dominance over bisexuality, in that it holds sway over the definition of the individual even when "bisexual" would appear to be the more accurate label.

This one drop perspective also explains a measure of the biphobia in a similar way to that in which homophobia can be explained. Rigid boundaries of heterosexuality must be maintained so as to avoid the reclassification of one's sexual orientation away from the dominant framework, especially in a system where this relabelling cannot be reversed (Anderson, 2009, as cited in Anderson & Adams, 2011). Thus both homophobia and biphobia seem in part to be driven by a male-dominated culture pervaded by a fear of being perceived as having same-sex sexual desires.

Internalized vs Externalised Biphobia

Externalised biphobia is a similar construct to socially familiar forms of prejudice such as racism, sexism and homophobia - a prejudice against a particular aspect of individual identity enacted by members of another social group; in the case of biphobia, against bisexuality and bisexual individuals. The external component of the phrase refers to outwardly projected prejudice and discrimination against other people for their bisexual orientation.

Internalised biphobia represents a form of oppression wherein bisexual individuals internalize the overt social instances of externalized biphobia (Hoang, Holloway, & Mendoza, 2011). Both internalised homophobia and internalised biphobia can be categorized under the broader concept of internalized heterosexism. This latter construct incorporates the

understanding of a society wherein heterosexuality is the de facto norm, and deviations from this are often viewed in a negative light.

Both forms of biphobia can contribute towards an inherently bisexual individual identifying with alternative sexual identities (such as homosexual or heterosexual). A bisexual individual may be more likely to publicly identify as something other than bisexual under the pressures of externalised biphobia, in order to avoid the negative consequences associated with this form of prejudice (Hoang, Holloway, & Mendoza, 2011). This does not necessarily dictate that they will identify personally with an incongruent sexual identity, but merely that they may choose to publicly declare a different identity in order to avoid biphobic prejudice.

The *Workplace Equality Index* report (Stonewall, 2010b) noted a 47% discrepancy between the number of bisexuals reporting to be open about their sexual identity in the workplace (45%), as opposed to gay men (92%) (See & Hunt, 2011). Many of these undisclosing bisexuals reported a preference for holding a homosexual or heterosexual public identity, depending on the circumstances.

A bisexual individual may be more likely to identify personally with an alternative sexual identity (usually heterosexual or homosexual) if internalized biphobia is present. As they adopt the heteronormative views of their surrounding environment, they become more and more likely to commit the same bisexual erasure as their peers perpetrate. They may come to see themselves as a part of the heteronormative sexual orientation duality, perhaps defined by their most recent sexual attraction, behaviour or fantasy, or emotional preference (Fox, 2003).

Prejudice Towards the Bisexuality Label

The negative associations of bisexuality were heightened in the 1980s by the outbreak of the HIV epidemic. The homosexual community was considered to be the domain of the HIV

virus, and bisexuals (and mostly bisexual men) were claimed to be the gateway of HIV from the homosexual to the heterosexual community, through unsuspecting heterosexual partners (Erickson-Schroth & Mitchell, 2009). As it is also considered a less stable sexual identity category (mostly due to continued myths and stereotypes), bisexuality was also an easier target to blame for the epidemic than other groups. This myth has perpetuated into modern day society, where some see bisexuals as more likely than heterosexuals or homosexuals to transmit an STD to their partners (Herek, 2002).

As "traitors to the Lesbian Nation," bisexual women have been targeted as weakening the stance of the lesbian political movement. Some lesbians use their sexuality as a form of political statement, and thus bisexual women interfere with the stability of a group based on this premise (Morgenstern, 2004), countering the lesbian-feminist political movement against patriarchy and women's oppression (Keppel & Hamilton, 2007).

The allegation that bisexuals are just "going through a phase" is a quote often heard by bisexuals. In asserting the temporary status of bisexuality, heterosexuals and homosexuals are strengthening the binary basis of their own sexualities, which to most are delimited in relation to their polar opposite. Bisexuality is seen as a step along the path towards acquiring a more stable identity – homosexual or heterosexual (Erickson-Schroth & Mitchell, 2009). This viewpoint interacts with the idea that bisexuals are by nature "indecisive" or "confused" in their sexuality, unable to "choose" what sexual orientation they subscribe to.

The notion that bisexuals will "never be sexually satisfied" is based on the belief that they will only feel emotionally or sexually fulfilled from intimacy with both male and female partners (Yost & Thomas, 2012). This is another unfortunate side-effect of the socially perpetuated binary of male/female gender and homosexuality/heterosexuality, in that bisexuality is not based on a duality of genders, but rather based on an attachment regardless of this duality (Brewster & Moradi, 2010). Thus their need for intimacy hinges on a partner

being another person, as opposed to relying specifically on particular gender characteristics to attain fulfilment.

Bisexuals also represent a source of discomfort to both heterosexuals and homosexuals, in that they symbolize a disruption to the traditional dichotomy of homosexuality-heterosexuality, as perpetuated by mainstream social values (Herek, 2002). Bisexuals are subjected to a range of negative attitudes both from heterosexual communities known for their traditionally heteronormative stances, and from more liberal heterosexual populations, as well as homosexual populations, who some might think would know better than to discriminate against sexual minorities.

Some of the prejudice directed towards bisexuality presents in the form of bisexual erasure, an attempt to de-legitimize bisexuality as a sexual identity (Erickson-Schroth & Mitchell, 2009). This can occur through refuting or ignoring its existence, or through automatically assimilating its members into other sexual identity labels (usually hetero- or homosexual). Bisexual erasure occurs not only within social settings, but also in academic circles, where extensive research literature posits homosexuality as the only possible alternative to heterosexuality (Barker, Yockney, Richards, Jones, & Bowes-Catton, 2012), effectively dismissing anything lying outside of the traditional sexuality dichotomy.

Beyond the simple ignoring of bisexuality, some researchers have also set out explicitly to disprove its existence. Erickson-Schroth and Mitchell (2009) cite an author who conducted a study on genital and self-reported arousal in a group of men in order to prove the hypothesis that bisexual men do not exist. In the cited study, the researcher measures penile vasodilation amongst men as a measure of sexual arousal, and exposes men of varying sexual identities to homosexual, heterosexual, and bisexual pornography, in an attempt to prove that all of the men are either homosexual or heterosexual only. That researchers perpetuate the same stigma against bisexuality through such studies, despite the existence of a large collection of studies

and knowledge exploring bisexuality, is perhaps indicative of the level of prejudice faced by self-identifying bisexual individuals.

The social invisibility of bisexuality may be attributed to a number of factors, but perhaps most prominent is the social tendency to attribute sexual orientation by virtue of the same-sex or opposite-sex nature of current or most recent relationships (Ochs, 1996). In a predominantly monogamous society, this creates an inherent difficulty in forming a bisexual assumption of any individual, as most will only maintain romantic faithful relationships with one person at a time.

This invisibility is also perpetrated in the media. Stonewall, an LGBTQIAA rights group in the United Kingdom, published a report (Stonewall, 2010a) on the prominence of bisexuals in popular media. Of the 126 hours, 42 minutes and 17 seconds of youth TV that was analysed, bisexual characters only occupied 5 minutes and 9 seconds, while gay men and lesbians appeared for 4 hours and 24 minutes, and 42 minutes, respectively (See & Hunt, 2011). Furthermore, bisexuals were not portrayed in a positive or realistic manner at any point in this coverage (See & Hunt, 2011).

This widespread erasure of bisexuality as a legitimate sexual identity contributes strongly towards a socially perceived instability of the label. In addition to this, the fact that bisexuality is often seen as a phase of transition that a person moves through before accepting their “true” sexual identity (Klesse, 2011) creates further instability for the label. Heterosexuals and homosexuals looking to dismiss bisexuality as a viable sexual identity have a vast arsenal of social norms at their disposal to attack the legitimacy of bisexuality.

These stereotypes and myths represent a large proportion of the general negative attitudes held towards bisexual individuals. Members of the bisexual community experience negative attitudes directed at them from heterosexual groups, as well as a large degree of prejudice and

hostility directed towards bisexuals from homosexual groups (Stobie, 2003). These attitudes impact negatively on their lives. In order to address these beliefs and instil more realistic ideas about bisexuality amongst homosexual and heterosexual communities, the roots of these beliefs need to be understood to a greater degree.

Factors Affecting Biphobia

Tolerance of ambiguity. Given the lack of clarity surrounding the definition of bisexuality within society as a whole, the concept can present a certain degree of ambiguity to those not familiar with the field of sexuality. This would suggest that the widespread acceptance of bisexuality would require a degree of ambiguity tolerance from the general public, and thus this presents an attractive variable for measuring in relation to attitudes towards bisexuality.

Much like that of bisexuality, the definition of tolerance of ambiguity is not necessarily clear-cut. In its most basic form, it can be said to refer to the reaction of an individual or group in response to their perception of a stimulus which appears to be unfamiliar, unclear or contradictory to them (Bors, Gruman, & Shukla, 2010). Intolerant reactions are typified by cognitive, behavioural or emotional reactions "including stress, rigid dichotomizing into fixed categories, early selection and maintenance of one solution in a perceptually uncertain task, premature closure, clinging to the familiar, and acceptance of statements representing black-and-white attitudes" (Furnham & Ribchester, 1995, as cited in Bors, Gruman, & Shukla, 2010).

Research into tolerance of ambiguity has been plagued for years by inconsistencies in its relationship to other variables. Studies have repeatedly demonstrated contrasting results in favour of or against correlations between tolerance of ambiguity and various other constructs, such as preference for attitude-consistent arguments (Feather, 1964; 1969, as cited in Bors,

Gruman, & Shukla, 2010), and ethnocentrism (Block & Block, 1951; McCandless & Holloway, 1955; and O'Connor, 1952, as cited in Bors, Gruman, & Shukla, 2010).

Furthermore, various attempts at testing tolerance of ambiguity have displayed limited psychometric evidence for their validity and reliability. Despite its frequent use amongst scientific literature for measuring tolerance of ambiguity, Budner's (1962) tolerance for ambiguity scale presented an internal consistency of 0.49 at publication (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010), and yet has remained as a popular measure of choice (Bors, Gruman, & Shukla. 2010).

Herman, Stevens, Bird, Mendenhall, and Oddou (2010) further suggest that theoretical disagreement about the dimensionality of tolerance of ambiguity (as a single, multifaceted construct, vs up to eight separate dimensions), as well as cross cultural contextual differences in the understanding of the construct, may contribute towards limitations in our current understandings of tolerance of ambiguity. To this end, they developed a 12 item adapted version of Budner's (1962) tolerance for ambiguity scale, in order to address its documented shortcomings.

Yost and Thomas (2012) conducted a study on the gender differences associated with biphobia, and suggested in their discussion that tolerance for ambiguity may be a unique contributing factor towards biphobia but not homophobia. This suggestion was premised on the idea that the apparent grey-area status of bisexuality in terms of a socially dominant duality of hetero- and homo-sexuality may contribute towards tolerance of ambiguity being of particular significance in the study of biphobia and not homophobia.

***Social Conservatism*.** Wilson (1973) provided a description of the ideal conservative individual. He cited traits such as "religious fundamentalism, pro-establishment politics, advocacy of strict rules and punishment, militarism, intolerance of minority groups, conventional tastes in art and clothing, restrictions on sexual activity, opposition to scientific progression, and the tendency to be superstitious" (Maltby & Price, 1999, p. 389).

Wilson (1973) went on to explain the construct of social conservatism in terms of the construct of uncertainty, in effect directly tying low tolerance of ambiguity to high levels of conservatism. In describing his dynamic theory of conservatism, he extracted four primary factors constituting conservatism: "resistance to change, tendency to play safe, the quantification of the generation gap, and internalization of parental values" (Maltby & Price, 1999). These four primary factors were regarded as defences against uncertainties in the individual's reality which they perceive as threatening.

Highly conservative people may thus find comfort in the familiar, and therefore shun those people who present solid contrasts to what is most familiar to them. Considering that heterosexuality is the de facto norm within most of modern-day society, and that the "gay rights" movement is only a product of recent decades, it seems clear that alternative sexualities would already present somewhat of an out-of-the-ordinary status. These sexualities may then be interpreted by the conservative individual as uncertain, and thereby threatening.

Eliason (1997) demonstrated that biphobia and homophobia often share the same predictor variables, amongst which he cited church attendance (Selzer, 1992), lack of contact with sexual minority groups (Herek & Glunt, 1993), and age (Marsiglio, 1993) as examples of salient predictors. High conservatism scores have demonstrated correlations with a number of closely related constructs: religious fundamentalism (Swartz, 2011); lack of education (Ray,

1990); and older age (Trubtt, 1993), amongst many other variables. These demonstrate the likely relationship between high conservatism scores and high biphobia scores.

Studies such as these indicate some of the ongoing interest displayed in social conservatism over the last half a century. Although social conservatism has been a variable of interest for decades, it presents a unique challenge in its measurement, as it is highly dependent on changing times (Henningham, 1996). Issues which may have been at the forefront of public moral debate some decades ago (e.g. interracial marriage) do not continue to hold the same saliency within society in the modern day, while public scrutiny shifts to new topics (e.g. same-sex marriage equality). In an examination of the Wilson-Patterson Conservatism Scale, Walkey, Katz and Green (1990) cite such factors as "beatniks/hippies," "working mothers" and "mixed marriages" (p.986) amongst items of significance in this measure of conservatism – arguably subjects of past saliency and modern day insignificance.

The 50-item Wilson-Patterson conservatism scale is perhaps one of the most popular all-time conservatism scales available (Maltby, 1997), but its 1968 development time-frame leaves a lot to be desired in terms of being relevant to more modern times. The construct of conservatism measured by this scale has been demonstrated to become increasingly inconsistent the further away the sample group is from the original scale development sample of primarily English-speaking, Judeo-Christian rooted people, in terms of spatial, historical and cultural gaps (Walkey, Katz, & Green, 1990). Thus a newer, more cross-culturally applicable measure of conservatism appears warranted, especially within a South African context of multiculturalism.

Henningham (1996) undertook a revision of the scale, wherein he sought not only to minimize the number of test items, but also to maintain reliability and validity indications while presenting a more recently applicable version of the test with cross-cultural

applicability. This 12 item conservatism scale demonstrated good internal reliability in both Henningham (1996) (0.81) and Maltby's (1997) (0.7) evaluations of the scale.

Gender, age and race. Gender has been demonstrated to be highly salient in examining differences in binegativity (Yost & Thomas, 2012). The gender of both the bisexual person and those who interact with them both have an impact on the level of binegativity, with females usually displaying more positive attitudes towards bisexuals, and female bisexuals being the recipients of more positive overall attitudes (Yost & Thomas, 2012).

Age and race have also been demonstrated to have an impact on attitudes about sexuality, and they are further linked to changes in tolerance of ambiguity and social conservatism (Eastwick, Richeson, Son, & Finkel, 2009; Trubtt, 1993; Yost & Thomas, 2012). The impact of these variables across multiple variables of interest within this study define them as perfect candidates for further inspection.

Bisexuality within Academia

On a broad level, there is a relatively overwhelming lack of research on bisexuality. An illuminating example, Clark and Serovich (1997), concerns an analysis of 17 family therapy journals between 1975 and 1995. The researchers found that only 0.006% (77 studies) focused on sexual minority issues, of which only two concerned bisexuality directly. Although there has been a dramatic rise in the number of both homosexuality and bisexuality studies in the last decade, there is still a large gap in terms of psychological knowledge to be filled.

The American Psychological Association adopted a non-discriminatory approach to sexual minority groups in 1975 (Bayer, 1981, as cited in Clark & Serovich, 1997), but this stance towards the LGBTQIAA community has been slow to filter throughout the academic psychology discipline. Relative to the previous example, the American Association for

Marriage and Family Therapy only began to include sexual orientation in their code of ethics as late as 1991, while similar organizations took another six years to reach a similar point (Clark & Serovich, 1997).

Alfred Kinsey, an American researcher most famous for his seminal works on "Sexual Behavior in the Human Male" (1948) and "Sexual Behavior in the Human Female" (1953) (also known as the Kinsey Reports), initiated what came to be an intensive academic focus on "alternative" (non-heterosexual) sexuality. Kinsey (1948) asserted that a major portion of the male population have some homosexual experiences at some point, although many avoid such contact while being acutely aware of their inclinations towards it.

As would appear to be evident, bisexuality is a topic not untouched by an academic focus, but also sorely lacking in attention in comparison to other minority sexual orientation groups. Although some success has been had in developing a bank of knowledge on bisexuality as its own topic (rather as a seemingly inseparable part of knowledge on homosexuality), much remains to be explored and verified in this area. Further research into a variety of themes of bisexuality can only be beneficial to both the field of psychology, and the bisexual movement as well.

This study aims to explore some of the potential paths that lead to negative attitudes regarding bisexuals, and create an understanding of what factors are responsible for these. Although some of the included factors have been examined before, this study aims to compare their impact to that of intra-psychic sexual orientation factors which may be influential in creating anti-bisexual attitudes, and have also been left relatively unexamined in previous literature. Looking at internalized biphobia sexual identity aspects and externalized biphobia, social values and demographic factors could be beneficial in comprehending and counteracting the formation of biphobic attitudes.

Chapter 3: Methodology

Introduction

This chapter details the implementation of the study as outlined in the previous two chapters. Information is provided on the research questions and hypotheses, research design, sampling procedures, data collection process, instrumentation, and ethical considerations of the study. This data provides a context for understanding the following results and data analysis chapters, whilst also allowing for the reproduction of this study to verify the validity of any findings.

Research Questions and Hypotheses

Research questions

- Is there a relationship between negative attitudes regarding bisexuality and sexual identity incongruence (that is, the differences between sexual identity, and sexual behaviour, sexual attraction, sexual fantasy and emotional attraction)?
- Is there a relationship between attitudes regarding bisexuality and tolerance of ambiguity and social conservatism?
- Is there a relationship between sexual identity incongruence and tolerance of ambiguity and social conservatism?
- Which of the variables (Sexual Identity Incongruence, Tolerance of Ambiguity, Social Conservatism) are important in explaining attitudes regarding bisexuality?

Research hypotheses

1. Incongruence between people's self-stated sexual identity and their patterns of sexual behaviour, sexual fantasy, sexual attraction and emotional attraction will correlate positively and significantly with high levels of biphobia.
2. High levels of tolerance of ambiguity and low levels of social conservatism will correlate significantly with low levels of biphobia.
3. Sexual identity incongruence will correlate significantly and positively with high levels of tolerance of ambiguity and significantly and negatively with high levels of social conservatism.
4. The relationship between sexual identity incongruence and high levels of biphobia will be more important than the relationship present between high levels of biphobia, and intolerance of ambiguity and high levels of social conservatism.

Research design. A quantitative methodology was chosen for the study in order to gain insight into potential patterns within society which may contribute towards negative attitudes towards bisexuality. The study by Hoang, Holloway and Mendoza (2011) exploring bisexual identity congruence and biphobia was an important inspirational factor behind this study, and thus keeping with a similar methodology to that paper also appeared to be the most logical route to building on that foundation of knowledge.

The epistemological and ontological position most commonly associated with quantitative research is the positivist paradigm, and it is duly employed in this study. The positivist makes certain assumptions in the pursuit of knowledge, namely that we live in an objective reality which can be investigated by objective measures and observation from a neutral perspective (Terre Blanche & Durrheim, 2008). Although interpretivism may be of important value in

examining individual nuances of sexual orientation, positivism seems to better lend itself to the measurement of attitudes and identities in a collective context.

A non-experimental, cross-sectional and ex-post facto research design was employed to measure pre-existing values, ideals and behaviours within a particular population within short time period. This was in line with the time constraints imposed by the particular master's degree framework, while also aligning with similar research into heterosexism and its contributing factors. A correlational design was also chosen to explore the potential relationship between attitudes towards bisexuality, tolerance of ambiguity, social conservatism and dissonance between sexual identity and related components of sexual orientation. Negative attitudes towards bisexuality were the particular focus of this study, and thus other variables were measured to explore their potential effect on the former. Statistical methods employed were Pearson Product Moment Correlations, Multiple Linear Regressions, and ANOVAs.

Sample and Sampling

The sample for this study was drawn from university students in two primary settings. The first was through introducing the study to undergraduate psychology students, who were encouraged to participate in the study voluntarily. The second setting was through the LGBTQIAA student association Kaleidoscope, "a network of lesbian, gay, bisexual, transgender, intersex and asexual (LGBTIA) student organisations at various universities and tertiary institutions across South Africa." (Kaleidoscope Youth Network, 2009). This second group was targeted in order to increase the participation of self-identifying non-heterosexual students, in order to allow for comparison between the factors affecting heterosexual and non-heterosexual students.

University students as a sample group also represent a significant time-period in terms of sexual identity development, as adolescents and young adults at this age often begin exploring their personal identity in terms of both sexuality (Rosario, Schrimsaw, & Hunter, 2011), as well as values and norms (Arnett, 2000). Young adults may gain a larger degree of independence at this point in their lives, and begin a process of sexual exploration and discovery (Arnett, 2000). A university setting also provides opportunity to be exposed to a variety of value systems which may contrast to those of their upbringing, providing impetus to adapt their personal mores to more closely align with their individuality (Arnett, 2000).

Non-probability sampling was employed purely for the sake of convenience and time efficiency. Each target group was approached (directly in the case of the psychology students, and indirectly through the Kaleidoscope leadership) and briefed with information pertaining to the study, including the types of information being gathered, the purposes of the study and the potential risks and benefits of participation. This sample group also represented a purposive and volunteer sampling process, as specific groups were approached for the intention of recruiting individuals who could participate without coercion in the study.

The specifics of the demographics of the sample (N=133) are represented in the following tables:

Table 1

Frequencies of the demographic of the sample

Variable	Value	Frequency	Percent
Age	18	7	5.26
	19	14	10.53
	20	30	22.56
	21	36	27.07
	22	26	19.55
	23	9	6.77
	24	11	8.27

Table 1 (continued)

Frequencies of the demographic of the sample

Variable	Value	Frequency	Percent
Race	Asian	1	0.75
	Black	47	35.34
	Coloured	4	3.01
	Indian	9	6.77
	White	70	52.63
	Other	2	1.5
Gender	Male	32	24.06
	Female	100	75.19
	Other	1	0.75
Year of Study	1st year	10	7.52
	2nd year	39	29.32
	3rd year	70	52.63
	4th year	0	0
	5th year	11	8.27
	No answer	3	2.26

Table 2
Frequencies of the sexual identity of the sample

Sexual Identity	Frequency	Percent
Heterosexual only	78	58.65
Heterosexual mostly	13	9.77
Bisexual mostly, somewhat heterosexual	5	3.76
Bisexual	4	3.01
Bisexual mostly, somewhat homosexual	5	3.76
Homosexual mostly	8	6.02
Homosexual only	20	15.04

Table 3

Descriptive Statistics for Age

Variable	Mean	Standard Deviation	Minimum	Maximum
Age	20.985	1.532	18	24

The descriptive statistics and frequency tables for the demographic data reveal a number of skewed demographics for the sample employed in this study. While the population's ages appeared well distributed across normal ranges for a university student population, the majority of the population were in their second or third year of studying.

Racial characteristics of the sample show a majority of white individuals, with the second biggest group representing black students, and minimal representation of other racial groups. This is in contrast to the South African population, which displays a much higher percentage of black people than other racial groups.

In terms of gender, female individuals were the clear majority group of this population, with females outnumbering males slightly over 3:1. Furthermore, only one student identified themselves as outside the gender binary.

Procedures

Ethical clearance was first obtained from the Ethics Committee at the University of the Witwatersrand (Appendix A). In order to approach the undergraduate psychology student population, the relevant lecturers and course coordinators for undergraduate psychology programs at the university were contacted, seeking permission to address the students and to distribute information on the study via their online student portal. A suitable time was arranged with each lecturer to attend one of their lectures, during which time the students were provided with a brief introduction to the research, the survey, the information being collected, and the relevant risks and benefits participation presented to them.

Students were also able to ask questions about the study either during the lecture time, or privately afterwards in person or via email. The relevant link to the online survey was also provided, and students were directed towards their student portal to access the link at a later stage if required. A four-week period was provided for students to access the link and complete the survey.

During the same time period, the student leaders of the Kaleidoscope LGBTQIAA activists group were contacted to obtain permission to disseminate information on the study to student members of the organization. The student leaders agreed to include information pertaining to the study, including a link to the survey, in their upcoming monthly members' publication.

The online survey for both groups was identical, and included an initial participant information sheet (Appendix B) as well as the questionnaire (Appendices C, D, E and F).

After the survey was closed, the results were downloaded in spreadsheet format, in order to be processed statistically. This data was kept on the researcher's personal computer under password protection, and was otherwise accessible to the research supervisor through the online research survey software Survey Monkey (n.d.) via password-protected access.

Instruments

Four standardized scales were used in this study to obtain information on the respondents' attitudes towards bisexuality (the independent variable), sexual orientation, tolerance of ambiguity and social conservatism (dependent variables). Demographic information on the participants' gender, age, race and year of study was also collected (see Appendix C).

Attitudes Regarding Bisexuality Scale. Mohr and Rochlen (1999) developed the Attitudes Regarding Bisexuality Scale (ARBS), and conducted five studies on the development and validation of this scale. Three versions of the scale were developed simultaneously - the male and female combined version was used for this study, and aims to measure attitudes towards bisexuals of both genders; a male-only and female-only version were also developed in order to facilitate the study of attitudes towards bisexuals of each gender separately, but these were not used within this study.

The ARBS is designed to measure two components of attitudes towards bisexual men and women, namely tolerance and stability (Mohr & Rochlen, 1999). Tolerance concerns "the degree to which bisexuality is viewed as an acceptable, morally tolerable sexual orientation" (Mohr & Rochlen, 1999, p. 1), while stability refers to the perceived legitimacy and stability of bisexuality as a sexual orientation.

The ARBS is free to use for non-commercial purpose. It is a self-administered scale consisting of 18 items rated on a 1 to 5 scale ("Strongly Disagree" to "Strongly Agree"). Of these items, the average of 10 items are used to create a Stability scale score (with items 1, 3,

5, 8, 12, 14 and 18 reverse coded), and 8 further items are averaged to create a Tolerance scale score (with items 2, 4, 9. 10. 13 and 15 reverse coded). High scores on the Tolerance scale indicate views of bisexuality as increasingly acceptable and morally tolerable, while high scores on the Stability scale indicate higher degrees of viewing bisexuality as a legitimate, stable and long-term sexual orientation. As recommended by the scale authors, the item exploring "American values" was reworded to reflect "social values," in order to better address the values of South African citizens.

The stability subscale of the ARBS demonstrated an initial internal Cronbach alpha of .92, while the tolerance subscale was measured at .91 in the original analysis during development (Mohr & Rochlen, 1999). Subsequent test-retest reliability estimates demonstrated a .85 for the stability subscale and .91 for the tolerance subscale, although the study authors note a potential inflation of these scores due to a small sample size, and thus recalculated adjusted reliability of .84 and .91 for stability and tolerance subscales, respectively. Other studies have found similar results for the reliability of both the Tolerance and Stability subscales – Zivony and Lobel (2014) measured these at .92 and .91, respectively. Limited examples of the use of this scale within the South African context appear to be available at this time.

General findings of the development study of Mohr and Rochlen (1999) suggest that the ARBS has a strong statistical support for its reliability and validity. Average attitudes towards bisexuality also averaged above the midpoint of the rating scale, suggesting positive general attitudes towards bisexuality within both homosexual and heterosexual populations. Lesbians and then gays appear to view bisexuality as a moral and tolerable sexual orientation, to a higher degree than their heterosexual counterparts.

Klein Sexual Orientation Grid (KSOG). The KSOG is a further development of the iconic Kinsey Scale, originally developed by Alfred Kinsey in order to further the academic investigation of bisexuality. Klein, Sepekoff and Wolf (1985) developed a 7 item Likert scale which allowed the individual to rate themselves on a 7-point scale to measure sexual attraction, sexual behaviour, sexual fantasy, emotional preference, social preference, self-identification, and heterosexual / homosexual lifestyle. The Likert scale values for these range from other sex only (1) to same sex only (7), with a bisexual value at the midpoint (4) and incremental steps in-between (Sell, 1997).

Each of the seven variables measured by the KSOG is further delineated into three separate dimensions, labelled as “past,” “present,” and “ideal.” These time separations create divisions according to the individual’s lifetime before 12 months ago, the most recent 12 months, and what they would eventually prefer, respectively.

Reliability of the KSOG has been demonstrated at .97, and test-retest reliability at .94 (Moore & Norris, 2005). The construct validity of the scale has also been demonstrated by factor study analysis (Wayson, 1983, and Weinrich, Snyder, Pillard, Grant, Jacobson, Robinson, & McCutchan, 1993, as cited in Moore & Norris, 2005), indicating that this is a highly appropriate scale to use in the study of sexual orientation.

Despite its popularity amongst sexual studies academics, the KSOG does display some clear limitations as a relatively simple measuring tool being applied to the complex construct of sexual orientation. Klein et al. (1985) developed the KSOG as a response to the potentially limited view the Kinsey Scale provides on what they saw as the multifaceted nature of sexual orientation, but in doing so they created a potentially cumbersome instrument. The provision of seven constructs, each differentiated into 3 separate time periods, creates 21 separate variables to be analysed, and this combined with a selection of other variables as most

quantitative research projects would do creates for a potentially cumbersome number of variables to analyse.

The second major obstacle that the KSOG presents is in basing sexual orientation exclusively on biological gender. Basing sexual orientation on biological characteristics presupposes a deterministic and biological assumption of sexual attraction purely for reproductive purposes (Coleman, 1987). A number of researchers have suggested extensive lists of other factors which contribute towards sexual orientation in modern day society, from financial reasons, relational reasons, and expressions of duty, to reasons of ritual, taboo or even anti-social statements, amongst others (Kaplan & Rogers, 1985; Ross, 1984).

Despite these flaws inherent to the KSOG, it nevertheless provides a broad perspective on sexual orientation, with particular reference to three key areas. First, it breaks sexual orientation down into a number of component factors which provide valuable insight into the construct. Second, it provides a more inclusive continuum for measuring aspects of sexuality along a sliding scale, rather than as purely two- or three-dimensional, as in homo-heterosexual or homo-hetero-bisexual categorisations. Finally, it provides insight into the fluidity of sexual orientation by examining past, present and ideal (future) components of each of the outlined subsections of sexual orientation.

This study also explores sexual identity incongruence, measured by the inconsistencies between the sexual identity of each individual, and their relative positions on the KSOG in terms of sexual behaviour, sexual attraction, sexual fantasy and emotional preference. Hoang, Holloway and Mendoza (2011) conducted a study wherein a similar bisexual identity incongruence score was determined. In their study, each KSOG score was subtracted from the average of their combined KSOG scores in order to determine a “bisexual identity incongruence” score. It was hypothesized (and subsequently demonstrated) that individuals

who demonstrated high bisexual identity congruence scores would be less likely to exhibit internalized biphobia.

One potential shortcoming of this approach is the apparent confusion between the concepts of sexual identity and sexual orientation. Sexual Identity is one of the variables measured by the KSOG, and refers to the individual's personal identification with a specific sexual orientation. Sexual identity as averaged by Hoang, Holloway and Mendoza's (2011) study from all of the KSOG results would appear to be an attempt to determine a more objective sexual identity, somewhat less dependent on the individual's subjective interpretation of their own sexual identity. Although objectivity is often a desired trait within quantitative research, dismissing the individual's personal identification of their own sexual identity may eliminate the potential for cognitive dissonance between strongly held personal beliefs (their Sexual Identity, as recorded on the KSOG), and real life circumstances (their experienced sexual behaviour, sexual attraction, sexual fantasy and emotional preference).

In order to account for this potential cognitive dissonance, difference scores were calculated for the difference between sexual identity, and each of the other KSOG variables, leading to four difference values (e.g. difference between sexual identity and sexual behaviour) over three separated time periods each (past, present and ideal). The absolute values of these were then used for running any further statistical calculations, as this prevents the formation of a bell curve of sexual identity incongruence scores, and instead presents a straight line of values from lowest to highest. The higher these Sexual Identity Incongruence scores are, the less congruent the individual's sexual identity and other aspects of sexual orientation are.

Tolerance of Ambiguity Scale. Measures of tolerance of ambiguity have historically been plagued with a history of weak reliability statistics and a lack of information regarding relevant factor structure (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010). The dimensionality of tolerance of ambiguity has also been questioned, with researchers arguing for between one and eight dimensions (Furnham, 1994, Kenny & Ginsberg, 1985, Kirton, 1981, McLain, 1993, and Norton, 1975, as cited in Herman, Stevens, Bird, Mendenhall, & Oddou, 2010), although the empirical consensus appears to establish tolerance of ambiguity as a multifaceted but unitary dimension (Herman et al., 2010).

The variety of domains within which tolerance of ambiguity is being measured has also been criticized, with sceptics arguing that the concept has been stretched too thinly over a variety of disciplines, altering it as a fundamental concept (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010). This has resulted in individual items within measures of tolerance of ambiguity being worded in overly generalized ways, creating differences in meaning across different contexts, and therefore different constructs being measured by the same tests in a variety of disciplines (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010).

Herman, Stevens, Bird, Mendenhall, and Oddou (2010) adapted Budner's (1962) 16 item measure of tolerance of ambiguity, as they found it to be the most frequently cited measure thereof. In doing so, they studied the original 16 items, and added a further 5 items of their own design, and after subsequent statistical analysis developed a measure of 12 items. Principal component analysis of their chosen 12 items indicated 4 strong factors which demonstrated strong internal consistency, although only as facets of a unitary construct (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010). The researchers labelled these factors as (1) valuing diverse others, (2) change, (3) challenging perspectives, and (4) unfamiliarity.

The first factor, valuing diverse others, was further demonstrated as the dominant factor amongst the four, accounting for 25.4% overall scale variance. The emergence of this

construct was tied to the introduction of cross-culturally valid items, and represents a previously unaccounted for factor of tolerance of ambiguity. The remaining three factors are both well-documented in previous literature on tolerance of ambiguity, and similarly self-explanatory - coping with change, dealing with unfamiliar situations, and managing conflicting perspectives (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010).

The 12 items of this scale are rated on a 5 point Likert scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5), with a neutral midpoint of "Neither agree nor disagree" (3) (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010). Seven of the items are reverse-coded, and tallied with the remaining five items to provide a final total score (Dewaele & Li, 2013). A high scores indicates an individual who is highly tolerant of unclear and unfamiliar stimuli within their reality. Herman et.al (2010) demonstrated an internal consistency score of .73.

Social Conservatism Scale. The 12 item social conservatism scale was developed by Henningham (1996) as a refinement of the popular Wilson-Patterson Conservatism Scale (Wilson & Patterson, 1968). Although the Wilson-Patterson Conservatism Scale had been used to a significant extent within academia, Henningham (1996) stresses the unique importance of modernity within testing of social conservatism. In arguing for this requirement, Henningham (1996) highlighted the use of outdated concepts as measures of social conservatism within the Wilson-Patterson Conservatism Scale, such as jazz, casual living, and pyjama parties.

The Wilson-Patterson Conservatism Scale is also a lengthy measurement tool, consisting of 50 items (Wilson & Patterson, 1968), and so Henningham (1996) sought to reduce the number of items required for testing purposes wherein multiple scales are often applied simultaneously. To this end, he developed his 12 item social conservatism scale, in a similar

vein to previous researchers' attempts (e.g. Collins & Heyes, 1993; Kirton, 1978), and demonstrated a reliable and valid measure of social conservatism therein (Henningham, 1996).

The 12 item Social Conservatism scale demonstrated an internal consistency of .74 in the original development study (Henningham, 1996), and later reviews of its Cronbach alpha score have been recorded as high as .95 (Maltby, 2005). The test consists of 12 items rated according to the respondent's level of agreement, where a 1 is "No," 2 is "Unsure," and 3 is "Yes," and these are added together to create a total score (Henningham, 1996). High scores indicate higher levels of social conservatism, with a mean of 22.1 and a standard deviation of 5 indicated (Henningham, 1996).

Demographic questions. Demographic information on the respondent's race, gender and year of study was collected in order to identify patterns of response according to demographic criteria. A strong effort was made to be as inclusive as possible within the gender and race options specifically, although ultimately only six racial groups (Asian, Black, Coloured, Indian, White and other) and 3 gender groups (male, female and other) responded.

Ethical Considerations

Research as a whole requires a generalized ethical perspective which at a minimum examines the potential worth of the pursuit thereof as an academic exercise. As the subject of investigation hones in on people specifically, the focus on the ethical considerations of the researcher becomes a more pronounced topic. And thus, when a study is conducted focusing on as personal a human topic as sexuality, it is no wonder that a variety of ethical focus points appear.

Standard ethical practices of informed consent, anonymity and confidentiality formed the framework of ethical practice within this study. Informed consent was built into the

questionnaire, in that the first section of the online survey consisted of a participant information sheet (Appendix B). Respondents were reminded that their participation in this study was entirely voluntary, and that they were free to withdraw their participation at any point before their final submission of the online survey. Subsequent to this point, their purposefully anticipated anonymity would prevent a later withdrawal of information, as all information collected was in no way personally identifiable to any other individual.

Confidentiality was promoted by both the use of a secure online survey platform (Survey Monkey), and participants were encouraged individually to ensure privacy around their person for the duration of their survey participation. No names or personally identifiable details were requested of the participants in the survey. Respondents were specifically informed of the potential sensitivity of the information requested of them, and the possibility that some would consider this markedly private information which they may not wish to share with others in a personally identifiable setting.

Demographic information collected was limited to age, race, gender and year of study, limiting the potential for information to be linked to any particular individual. The raw data from survey submissions was only available to the researcher and the researcher's supervisor, and this data was stored electronically with password protection. Data gathered will be destroyed upon completion of the researcher's thesis research report, barring potential article publication, in which case it will be destroyed after a five-year period.

The results of the study will be made available to any participant who requests them, and a summary thereof will be published online at an address provided to participants during the survey. The successful submission and approval of the master's thesis will also allow public access via the University of the Witwatersrand Library system.

Beyond these obvious concerns, the ethical implications of exploring individual sexual orientation and identity and orientation were also considered. These are subject areas which can be experienced as intensely private, and may evoke strong opinions and reactions from many people. Of particular concern was the possibility of participants coming to re-examine their own sexual identity in light of a review of their past, present and ideal sexual orientation and its associated factors. This process may hold the potential to cause some to question previously held self-concepts, creating confusion and potential dissonance.

For these reasons, participants were provided with information sources which may be of use to those who have questions around these matters. Contact information for appropriate counselling services was also provided, as well as the contact information of the researcher and the research supervisor.

Finally, the potential implications of the research were considered. Although a broad aim of the research was to contribute towards a knowledge-base which could facilitate a decrease in negative social attitudes towards bisexuality, possible negative consequences (as a result of either the outcomes of the research, or the wording thereof) had to be considered throughout the entirety of the project. A strict adherence to describing the correlation, as opposed to any potential causality, between the variables under investigation was very important to conducting an ethical research process.

Conclusion

This chapter has highlighted the objects of investigation, the tools used to examine these, and the process whereby this research was conducted. The results of this research investigation will be discussed in the following chapter.

Chapter 4: Results

Introduction

The chapters preceding this point have outlined the need for this type of research, the perspective of current literature on the aspects explored, and the process by which this study has been conducted. The outcomes of the process described in the methodology chapter will be outlined in this chapter, along with relevant discussion on those aspects these results most relevant to an understanding of the factors influencing negative attitudes towards bisexuality.

Descriptive Statistics

Attitudes Regarding Bisexuality Scale.

Table 4

Descriptive Statistics for Subscales of ARBS (N=133)

Variable	Number of items	Mean	Standard Deviation	Kurtosis	Skewness	Range *
ARBS Stability	10	3.535	0.839	-0.544	-0.214	3.5
ARBS Tolerance	8	3.441	0.519	0.571	-0.947	2.3
*Minimum = 1, Maximum = 5						

Cronbach's Alpha calculated for the ARBS: Stability and ARBS: Tolerance were .912 and .855 respectively, indicating excellent internal reliability for both scales. The skewness statistics for the ARBS results indicate approximately symmetric distribution for the ARBS Stability score, and a moderately skewed distribution of the ARBS Tolerance score towards the negative side. The mean score for the ARBS Tolerance scale is slightly higher than the midpoint of 3, suggesting that attitudes towards bisexuality tended towards a marginally more morally accepting perspective. In examining the ARBS Stability score, a mean score less than

0.6 points higher than the midpoint of 3 suggests that bisexuality was viewed as a legitimate and stable sexual orientation on average, although its sharp left skew and platykurtic shape suggest that most viewpoints are held within a small cluster of scores in a band near the centre of its distribution graph. This further indicates the relative absence of extreme viewpoints within this population, as reinforced by the range from the first quartile to the third quartile starting at 3.2 points and ending at 3.9 points, and a mode of 4 points.

Social Conservatism and Tolerance of Ambiguity.

Table 5

Descriptive Statistics for Social Conservatism and Tolerance of Ambiguity Scale

Variable	Number of items	Mean	Standard Deviation	Kurtosis	Skewness	Range*
Social Conservatism	12	19.880	3.458	-0.326	0.202	17
Tolerance of Ambiguity	12	40.241	4.964	-0.282	0.105	25
* Minimum = 12, Maximum = 36						

With a minimum scale score of 12 points, the Social Conservatism mean score for this population of 19.880 further demonstrates the trend amongst this population towards less conservative, more open-minded viewpoints. An approximately symmetric skewness with a platykurtic shape, and a range covering a large portion of the 24-point range maximum possible (12 points minimum, 36 points maximum) for this scale suggests that a large portion of this population consider themselves fairly non-conservative, with a few sparse outliers to the predominantly low-conservatism range majority.

The Tolerance of Ambiguity scale (ToA) has a maximum scale range of 12 to 60, which suggests that the mean of 40.241 is quite high. This population group appears to be fairly tolerant of ambiguous stimuli on average. Skewness for ToA is also approximately

symmetric, with a similarly platykurtic shape to that of Conservatism. The scores distribution of this scale appears to mimic the Conservatism distribution.

Klein Sexual Orientation Grid.

Table 6

Descriptive Statistics for Subscales of KSOG

Variable		Mean	Standard Deviation	Kurtosis	Skewness	Range *
Sexual Attraction	Past	2.654	2.219	-0.547	1.029	6
	Present	2.714	2.360	-0.813	0.963	6
	Ideal	2.669	2.376	-0.696	1.010	6
Sexual Behaviour	Past	2.489	2.357	-0.356	1.188	6
	Present	2.594	2.520	-0.762	1.063	6
	Ideal	2.647	2.381	-0.672	1.027	6
Sexual Fantasy	Past	2.880	2.286	-0.941	0.814	6
	Present	3.008	2.411	-1.233	0.693	6
	Ideal	2.797	2.361	-0.840	0.906	6
Emotional Preference	Past	2.752	2.311	-0.849	0.880	6
	Present	2.782	2.356	-0.902	0.873	6
	Ideal	2.805	2.288	-0.786	0.865	6
Sexual Identity	Past	2.481	2.214	-0.248	1.179	6
	Present	2.617	2.338	-0.643	1.048	6
	Ideal	2.579	2.313	-0.452	1.107	6

*Minimum = 1, Maximum = 7

All of the distributions within the KSOG indicated platykurtic kurtosis. This lower and broader peak of the distribution curve of the KSOG scores suggests that a large degree of clustering at particular values occurred within this population.

Sexual identity and sexual behaviour were highly skewed towards opposite sex preference within all time frames, suggesting that this population presents a strong bias towards those individuals who identify as heterosexual, and who predominantly engage in opposite sex behaviours. Sexual attraction was highly skewed towards opposite sex attraction in both past and ideal timeframes, while showing a moderate trend towards the same in the present timeframe, although bordering on a high skewness. This may indicate that sexual attraction fell in line with trends seen in both sexual identity and sexual behaviour.

Sexual fantasy and emotional preference were distinguished from the other KSOG variables in that, although they also demonstrated skewness towards opposite sex preferences, these were noticeably more moderate than those observed elsewhere. Present sexual fantasy in particular showed a much lower opposite sex preference than most of the other KSOG variables. Emotional preference and sexual fantasy in general, and present sexual fantasy in particular, could be interpreted as aspects of sexual orientation which enjoy greater freedom of range despite socially dictated heteronormativity. The mode for this sample was shown as opposite sex only for all KSOG variables measured.

Table 7

Descriptive Statistics for Sexual Identity Incongruence Scores

Variable		Mean	Standard Deviation	Kurtosis	Skewness	Range
Absolute difference between Sexual Identity and						
Sexual Attraction	Past	0.368	0.900	16.451	3.630	6
	Present	0.323	0.917	23.032	4.450	6
	Ideal	0.301	1.000	22.749	4.580	6
Sexual Behaviour	Past	0.368	0.925	21.040	4.154	6
	Present	0.398	0.977	17.365	3.833	6
	Ideal	0.338	0.999	22.072	4.458	6
Sexual Fantasy	Past	0.624	1.098	8.529	2.640	6
	Present	0.632	1.203	6.484	2.443	6
	Ideal	0.398	1.066	16.169	3.798	6
Emotional Preference	Past	0.647	1.163	5.844	2.252	6
	Present	0.647	1.207	5.821	2.312	6
	Ideal	0.617	1.254	6.391	2.448	6

An analysis of the descriptive statistics concerning the sexual identity incongruence scores indicates that the scores did not show very large differences on average. This suggests that sexual identity appears to match well with most other variables of the KSOG. All of the distribution results also indicated highly skewed distributions.

Table 8

Descriptive Statistics for Absolute Distance from Bisexuality of the KSOG Scores

Variable		Mean	Standard Deviation	Kurtosis	Skewness	Range
Absolute Distance from Bisexuality						
Sexual Attraction	Past	2.444	0.856	1.115	-1.438	3
	Present	2.564	0.782	2.780	-1.856	3
	Ideal	2.549	0.941	2.705	-2.025	3
Sexual Behaviour	Past	2.684	0.772	5.199	-2.491	3
	Present	2.805	0.645	12.212	-3.577	3
	Ideal	2.571	0.923	2.969	-2.088	3
Sexual Fantasy	Past	2.353	0.955	0.474	-1.294	3
	Present	2.436	0.907	1.297	-1.536	3
	Ideal	2.436	1.025	1.364	-1.689	3
Emotional Preference	Past	2.406	1.037	0.721	-1.501	3
	Present	2.451	0.996	1.144	-1.615	3
	Ideal	2.293	1.173	-0.133	-1.278	3

Considering that attitudes towards bisexuality were measured, bisexual individuals may be inclined to view bisexuality more favourably, and individuals further removed from a bisexual sexual orientation may be less inclined to do so. Following this logic, the distance of each KSOG variable from the midpoint (score of 4) representing bisexuality was measured, and the absolute value of this difference was correlated with the ARBS in order to measure the influence thereof.

The mean of the population shows that the average participant lay towards either extreme of homosexuality and heterosexuality of the KSOG spectrum. The sample was also highly

skewed across all aspects of sexual orientation, suggesting that a majority of individuals in this population did not identify as bisexual., although the indicated range of 3 suggests that some individuals represented outliers to the rest of the sample in their stated bisexuality.

Relationships Between Variables

Inter-variable relationships.

Table 9

Correlations Between the Sexual Identity Incongruence Scores, and Social Conservatism, Tolerance of Ambiguity, ARBS: Stability, and ARBS: Tolerance

Difference between Sexual Identity and		Conservatism	Tolerance of Ambiguity	ARBS: Stability	ARBS: Tolerance
(KSOG Variable)	(Time Frame)				
Sexual Attraction	Past	-.005	.044	.041	.158
Sexual Attraction	Present	.061	.179*	.076	.088
Sexual Attraction	Ideal	-.012	.114	.156	.158
Sexual Behaviour	Past	-.242**	.141	.222*	.232**
Sexual Behaviour	Present	-.203*	.146	.176*	.247**
Sexual Behaviour	Ideal	-.150	.095	.115	.169
Sexual Fantasy	Past	-.075	.147	.166	.205*
Sexual Fantasy	Present	-.070	.242**	.174*	.239**
Sexual Fantasy	Ideal	-.077	.260**	.291**	.278**
Emotional Preference	Past	-.022	.126	.095	.180*
Emotional Preference	Present	-.091	.125	.179*	.277**
Emotional Preference	Ideal	-.054	.125	.101	.154

Note: The "Difference between Sexual Identity and…" values represent the sexual identity incongruence scores, where the listed KSOG variable has been subtracted from the KSOG Sexual Identity score for the same time period.

The sexual identity incongruence scores were calculated using the absolute values of differences between sexual identity and the other KSOG values. Unfortunately, the results of this indicated a highly skewed sample, so these were then transformed into a two-category nominal variable – 0 indicating "No difference" and 1 indicating "some difference." Most of the correlations amongst the sexual identity incongruence scores and the other scale scores measured were insignificant. Significant relationships are discussed below:

Social Conservatism demonstrated two correlations amongst the sexual identity incongruence scores. Sexual identity incongruence in terms of individual sexual behaviour correlated weakly and negatively at the 5% level in the past and present timeframes. This suggests that there is some tendency for individuals who deviate in their sexual behaviour from their sexual identity to display lower levels of social conservatism.

Tolerance of Ambiguity demonstrated significant but weak correlations with three of the Sexual Identity Incongruence scores. These were with sexual attraction in the present timeframe ($p < .05$), and with sexual fantasies in the present and ideal timeframes. This suggests that there is some tendency for individuals who show some sexual identity incongruence in terms of their present and ideal sexual fantasy, and in terms of their present sexual attraction, to display higher levels of tolerance of ambiguity.

ARBS: Stability showed significant positive but weak correlations with Sexual Identity Incongruence in terms of the past and present timeframes for sexual behaviour, the present and ideal timeframes for sexual fantasy, and the present timeframe for emotional preference (Sexual Fantasy Ideal timeframe $p < .01$, remaining Sexual Identity Incongruence scores $p < .05$). This indicated a slight trend amongst individuals who showed incongruence between their sexual identities and their sexual behaviour in the past

and present, their sexual fantasy in the present and ideal, and their emotional preferences in the present, to view bisexuality as a more stable and long-term sexual orientation.

Finally, ARBS: Tolerance demonstrated positive and significant but weak positive correlations with sexual identity incongruence in terms of past and present sexual behaviour ($p < .01$), sexual fantasy for past ($p < .05$), present and ideal ($p < .01$), and emotional preference for past ($p < .05$) and present ($p < .01$). This indicates a slight pattern of a higher rate of viewing bisexuality as a morally permissible sexual identity within individuals who showed some incongruence between their sexual identities and their past and present sexual behaviour, past and present emotional preference, and sexual fantasies over all three timeframes. The ARBS did not significantly correlate otherwise with the remaining Sexual Identity Incongruence scores.

Table 10

Correlations Between ARBS and the Dichotomized Absolute Distance from Bisexuality of the KSOG Scores

			ARBS Stability	*ARBS Tolerance*
Absolute points away from bisexual	Sexual Attraction	Past	-.047	-.179*
		Present	-.167	-.145
		Ideal	.005	-.120
	Sexual Behaviour	Past	.001	-.144
		Present	-.238**	-.160
		Ideal	-.049	-.152
	Sexual Fantasy	Past	-.165	-.264**
		Present	-.143	-.192*
		Ideal	-.143	-.204*
	Emotional Preference	Past	.021	-.008
		Present	.081	.021
		Ideal	.025	-.080
	Sexual Identity	Past	.002	-.137
		Present	-.114	-.156
		Ideal	-.111	-.203*

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The scores for the absolute distance away from bisexuality were heavily skewed, and so these variables were dichotomized to represent two groups – those at the bisexual midpoint (scored as 0), and those away from it (scored as 1). A few significant relationships were demonstrated in these correlations, particularly between ARBS: Tolerance and the distance from bisexuality scores. ARBS: Tolerance correlated significantly, weakly and negatively with the past timeframe of Sexual Attraction, the ideal timeframe of Sexual Identity, and all

three timeframes of Sexual Fantasy ($p < .01$ for the past timeframe of Sexual Fantasy, and $p < .05$ for all remaining significant correlations). This indicates a slight pattern towards higher moral acceptance of bisexuality for people who reported a previous more bisexual affiliation for individuals who were previously attracted to both the same and other genders, for individuals who reported bisexual sexual fantasies in the past, currently, and in their ideal future, and individuals who would ideally identify as bisexual in the future.

ARBS: Stability demonstrated one significant ($p < .01$), weak and negative correlation with the present timeframe for Sexual Behaviour. This suggests some inclination for individuals who have engaged in sexual behaviour with the same and other genders in the last 12 months to view bisexuality as a more stable sexual orientation.

Table 11

Correlations Between ARBS: Tolerance, ARBS: Stability, Tolerance of Ambiguity, and Social Conservatism

Correlations		Social Conservatism	ARBS	
			Stability	*Tolerance*
ARBS	*Stability*	-.336**	-	-
	Tolerance	-.494**	.607**	-
Tolerance of Ambiguity		-.248**	.316**	.266**

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Some of the most consistent correlations were demonstrated outside of the KSOG results. The two subscales of the ARBS, Stability and Tolerance, demonstrated a significant ($p < 0.01$) and moderate correlation of .607. This indicates that individuals who view bisexuality as a morally acceptable sexual orientation are more likely to see it as a stable and legitimate

sexual orientation. This relationship is perhaps expected, as both scores are facets of an individual's overall attitudes towards bisexuality. Social Conservatism and ARBS: Tolerance demonstrated a significant ($p < 0.01$) and moderately strong negative relationship of -.494. This indicates that individuals displaying more conservative values are more likely to view bisexuality as a morally wrong concept.

Social Conservatism demonstrated significant ($p < .01$) but weak relationships with ToA and ARBS: Stability. Highly conservative individuals may be predicted to display a low tolerance of ambiguity and to view bisexuality as a transitory or unstable sexual identity, but this relationship only accounts for 6% and 11.2% of the variation in the variables, respectively.

ToA also correlated significantly ($p < .01$), though weakly, with ARBS: Stability and ARBS Tolerance, with values of .316 and .266 respectively. This indicates that individuals who display higher tolerance for ambiguity tend to view bisexuality more favourably. However, these variables, respectively, account for approximately 10% and 7% of the variation in the two facets of attitudes towards bisexuality.

Multiple Linear Regression results. Multiple linear regression analyses were conducted to determine the primary contributing factors towards the two ARBS scales, Stability and Tolerance. As the sample size was not large enough to accommodate an analysis of all of the Sexual Identity Incongruence scores, the present timeframe was selected from the three timeframes scored, to provide an indication of the influence of sexual identity incongruence on present attitudes regarding bisexuality. The skewness of the Sexual Identity Incongruence scores was also potentially problematic, and so once again the dichotomized values of (0) "No Difference" and (1) "Some Difference" were used.

A multiple linear regression was calculated to predict ARBS: Stability based on their scores for Tolerance of Ambiguity, Social Conservatism, and their Sexual Identity Incongruence dichotomized scores relating to Sexual Behaviour, Sexual Attraction, Sexual Fantasy and Emotional Preference, all in the present timeframe. A significant regression equation was found ($F(6,126) = 5.200$, $p < .000$), with an adjusted R^2 of .189.

Table 12

Significance and Standardised Beta Values for Multiple Linear Regression on ARBS: Stability Factors

Variables		Significance	Standardised Beta Value
Social Conservatism		.003	-.260
Tolerance of Ambiguity		.011	.219
Dichotomized Sexual Identity Incongruence score for:	Sexual Attraction	.960	-.005
	Sexual Behaviour	.869	.017
	Sexual Fantasy	.501	.070
	Emotional Preference	.194	.125

Social Conservatism and Tolerance of Ambiguity were significant predictors of ARBS: Stability ($p = .003$ and $p = .011$, respectively), but the Sexual Identity Incongruence scores for Sexual Attraction ($p = .960$), Sexual Behaviour ($p = .869$), Sexual Fantasy ($p = .501$) and Emotional Preference ($p = .194$) were not significant predictors thereof.

Standardised beta values also indicate that Social Conservatism makes the biggest contribution to variance within ARBS: Stability (beta = -.260), although Tolerance of Ambiguity also provides a statistically significant contribution with a beta value only slightly lower (beta = .219). Beta values indicate the variables which provide the strongest influence on the dependent variable independent of other factors (Pallant, 2010), therefore Social Conservatism is shown to make the strongest independent contribution towards ARBS: Stability.

The negative beta value for Social Conservatism indicates that the lower the level of conservatism within the individual, the more they are likely to view bisexuality as a stable and long-term sexual orientation. The positive beta value for Tolerance of Ambiguity shows that individuals who are more able to tolerate unclear stimuli within their reality are more likely to view bisexuality as a legitimate and stable sexual orientation.

A second multiple linear regression was calculated to predict ARBS: Tolerance based on their scores for Tolerance of Ambiguity, Social Conservatism, and their Sexual Identity Incongruence scores relating to Sexual Behaviour, Sexual Attraction, Sexual Fantasy and Emotional Preference, all in the present timeframe. A significant regression equation was found ($F(6,126) = 9.664$, $p < .000$), with an adjusted R^2 of .302.

Table 13

Significance and Standardised Beta Values for Multiple Linear Regression on ARBS: Tolerance Factors

Variables		Significance	Standardised Beta Value
Social Conservatism		.000	-.436
Tolerance of Ambiguity		.152	.113
Dichotomized Sexual Identity Incongruence score for:	Sexual Attraction	.880	-.014
	Sexual Behaviour	.871	.016
	Sexual Fantasy	.210	.120
	Emotional Preference	.083	.154

Social Conservatism was once again a significant predictor of ARBS: Tolerance (p = .000), but Tolerance of Ambiguity (p = .152), and the Sexual Identity Incongruence scores for Sexual Attraction (p = .880), Sexual Behaviour (p = .871), Sexual Fantasy (p = .210) and Emotional Preference (p = .083) were not significant predictors thereof.

Standardised beta values indicate that Social Conservatism is the only significant contributor towards variance within ARBS: Tolerance (beta = -.436, p < .01). Social Conservatism is once again the strongest (and in this instance, only) independent contribution towards ARBS: Tolerance. The negative beta value for Social Conservatism indicates that the lower the level of conservatism within the individual, the more they are likely to view bisexuality as a stable and long-term sexual orientation.

Although none of the dichotomized Sexual Identity Incongruence scores showed statistical significance, the relevant score for Emotional Preference did show a tendency towards significance, with p = .083.

Demographic variables.

Table 14

Descriptive Statistics: Means and Standard Deviations of ARBS Scores by Race

		N	Mean	Std. Deviation
ARBS: Stability	White	70	3.679	.848
	Black	47	3.272	.799
	Total	117	3.515	.850
ARBS: Tolerance	White	70	4.364	.590
	Black	47	4.231	.666
	Total	117	4.310	.622

Table 15

Race ANOVA for ARBS

		Sum of Squares	df	Mean Square	F	Significance
ARBS: Stability	Between Groups	4.640	1	4.640	6.749	.011
	Within Groups	79.072	115	.688		
	Total	83.712	116			
ARBS: Tolerance	Between Groups	.497	1	.497	1.286	.259
	Within Groups	44.429	115	.386		
	Total	44.925	116			

ANOVAs were run to test for significant differences between gender and racial groups in the ARBS. The racial groups only examined black and white students, as the other race groups were not adequately represented within this sample. ARBS: Stability demonstrated a significant difference between black and white racial groups, with $F(1, 115) = 6.749$ ($p = .011$). This indicates that the average score for black individuals was significantly lower than the average score for white individuals. Race in terms of black and white groups was thus demonstrated as a significant factor affecting individual views of the legitimacy of bisexuality as a sexual orientation, but not individual moral perceptions of the acceptability of bisexuality.

Table 16

Descriptive Statistics: Means and standard deviations of ARBS scores by Gender

		N	Mean	Std. Deviation
ARBS: Stability	Male	32	34.38	9.101
	Female	100	35.60	8.188
	Total	132	35.30	8.399
ARBS: Tolerance	Male	32	35.81	4.439
	Female	100	33.92	5.359
	Total	132	34.38	5.199

Table 17

Gender ANOVA for ARBS

		Sum of Squares	df	Mean Square	F	Sig.
ARBS: Stability	Between Groups	36.379	1	36.379	.514	.475
	Within Groups	9205.500	130	70.812		
	Total	9241.879	131			
ARBS: Tolerance	Between Groups	86.826	1	86.826	3.268	.073
	Within Groups	3454.235	130	26.571		
	Total	3541.061	131			

For the gender ANOVA, the results for male and female gender groups were analysed, as no other gender groups were adequately represented within the sample. Gender did not appear to be a significant factor for either ARBS: Stability or ARBS: Tolerance. No evidence was thus supplied for a relationship between gender and attitudes regarding bisexuality.

A further correlation of age with ARBS: Stability and ARBS: Tolerance also yielded insignificant values, suggesting no significant relationship between age and attitudes regarding bisexuality in this sample. The range of ages examined in this study was extremely

limited however, and so this data only provides limited insight into the effect of age on attitudes regarding bisexuality.

Conclusion

This chapter outlined the results of the statistical analyses conducted on data collected in the form of four scales from university students. Descriptive statistics were provided for the relevant variables. Correlation matrices of both the variables scores, as well as manipulations of the data for comparative purposes, were outlined. The results of the ANOVAs exploring the effects race and gender, as well as a correlation of the effects of age, were also provided. The final chapter will discuss these statistical findings in further depth, and explore the implications of such.

Chapter 5: Discussion

Introduction

This chapter consists of an exploration of the discussion of the results and the overall aims of this research study. An evaluation of the methodology employed is provided, focusing specifically on its strengths and limitations. The implications of this research and the possibilities for future research are discussed, in order to expand and improve on the methods pursued herein. Finally, recommendations for addressing attitudes towards bisexuality are provided, in line with findings in this research report as well as from previous literature.

Discussion of Results

Research question 1. The first research question queried the possibility of a significant correlation between the Sexual Identity Incongruence scores (the difference scores calculated between Sexual Identity and the other KSOG variables), and scores obtained for the two facets of the ARBS, Stability and Tolerance.

Using Pearson's Product Moment Correlation, the two subscales of the ARBS were correlated with the dichotomized versions of the four Sexual Identity Incongruence scores (each divided into timeframes representing the past, present and ideal, for a total of 12 values). The test indicated that the ARBS: Stability correlated significantly with five of the Sexual Identity Incongruence scores – Sexual Behaviour Past and Present, Sexual Fantasy Present and Ideal, and Emotional Preference Present. The ARBS: Tolerance scores correlated positively and significantly, although weakly, with seven Sexual Identity Incongruence scores – Sexual Behaviour Past and Present, Sexual Fantasy in all three timeframes, and Emotional Preference Past and Present.

Individual attitudes regarding bisexuality, concerning both its moral acceptability and its legitimacy as a sexual orientation, appeared to be primarily influenced by sexual identity incongruence related to three aspects of sexual orientation – sexual behaviour, sexual fantasy and emotional preference.

Freud's concept of Reaction Formation was queried within the literature analysis as a potential outcome of cognitive dissonance. Individuals may feel at odds with the incongruence between their sexual identity and other aspects of their sexual orientation, such as their sexual behaviour or emotional preferences. The process of Reaction Formation may lead such individuals to express hostility towards external symbols thereof (Adam, Wright, & Lohr, 1996) – in this case, bisexuals and bisexuality would symbolize this incongruence. The results of the statistical analysis on individuals displaying such sexual identity incongruence appear to indicate the opposite however!

This could be indicative of a related but contrasting outcome of cognitive dissonance within the individual. Schick et al. (2012) described the concept of cognitive dissonance as a cognitive process which predicts the occurrence of psychological distress in an individual experiencing contradicting thoughts, and the eventual attempt to either address the discordant cognitions or minimize the importance of them. Thus Freud's Reaction Formation may point towards the initial psychological distress, while the outcomes of this study may suggest the effects of attempts to redress individual beliefs regarding bisexuality.

It could be hypothesized that individuals experienced cognitive dissonance as a result of the conflict between the expectations of their sexual identity on other facets of their sexual orientation, and their lived experiences thereof. This in turn could lead to them developing more positive views of bisexuality as a means of minimizing the importance of a strict match between sexual identity and other aspects of sexual orientation.

Past and present timeframes were also shown more frequently to have a significant impact on attitudes regarding bisexuality, while the ideal future conception of most of the elements of sexual orientation did not display a significant relationship with attitudes regarding bisexuality, with the exception of sexual fantasy in the ideal timeframe.

The ideal timeframe of each element of sexual orientation is perhaps more cognitive than the past and present timeframes, while the latter are more strongly tied to lived experiences. It may thus be logical that the more cognitive of the timeframes coincides with the potentially more cognitive of the sexual orientation aspects, sexual fantasy.

Hoang, Holloway and Mendoza (2011) hypothesized and found a correlation between decreased bisexual identity incongruence and decreased internalized biphobia, with a demonstrated correlation of -.228 ($p = .034$). Although their study pertained to internalized biphobia specifically, it seemed tenable to expand this effect to externalized attitudes regarding bisexuality. In contrast, this study indicated results which at first glance may contradict those of Hoang, Holloway and Mendoza (2011) – a relationship between increased sexual identity incongruence and decreased biphobia. These differences may relate to the differences in how sexual identity incongruence was measured in each study, or to the differences between the effects of sexual identity (in)congruence on internalized biphobia vs external attitudes regarding bisexuality.

Research question 2. The second research question concerned a potential significant relationship between high tolerance of ambiguity and low levels of social conservatism, and low levels of biphobia. ARBS: Stability indicated a significant but weak positive correlation with ToA, suggesting that there is a slight propensity for individuals who display a higher tolerance of ambiguous information to view bisexuality as a stable and viably long term sexual identity. A significant but weak negative correlation was demonstrated between ARBS: Stability and Social Conservatism, suggesting a similar trend for less conservative individuals to look more favourably upon bisexuality as a stable sexual identity.

ARBS: Tolerance also indicated a significant but weak positive correlation with Tolerance of Ambiguity, implying that individuals displaying a higher tolerance of ambiguous information may at times view bisexuality as more morally acceptable sexual orientation. ARBS: Stability and Social Conservatism demonstrated a weak but significant correlation

Tolerance of ambiguity is a variable suggested in previous literature (Yost & Thomas, 2012) as a salient point of exploration in terms of its relationship to attitudes towards bisexuality, and it was shown within this study to correlate significantly, albeit weakly, with both facets of the ARBS.

Conservatism has also been associated with negative attitudes towards bisexuality in previous studies (Mohr & Rochlen, 1999), and was again demonstrated to do so within this study. Social Conservatism correlated moderately with ARBS: Tolerance, and weakly with ARBS: Stability, suggesting that highly conservative individuals are more likely to find bisexuality to be morally reprehensible as well as an unstable sexual orientation.

Individuals were found to be more likely to demonstrate negative attitudes towards bisexuality if they were shown to be more conservative (with a weak and moderate negative correlation for ARBS: Stability and ARBS: Tolerance, respectively), and also more likely to

demonstrate the same when they were shown to be less tolerant of ambiguous stimuli and situations (weak positive correlations with ToA).

The second research question was thus supported by the available evidence, as high levels of ToA and low levels of Social Conservatism demonstrated significant correlations with ARBS in terms of both Tolerance and Stability.

Research question 3. The third research question queried a significant relationship between sexual identity incongruence, and high levels of tolerance of ambiguity and low levels of social conservatism. Social Conservatism demonstrated significant negative but weak correlations with two of the Sexual Identity Incongruence scores: Sexual Behaviour Past and Present. Tolerance of Ambiguity correlated positively and significantly with three Sexual Identity Incongruence scores, those for Sexual Attraction Present and Sexual Fantasy Present and Ideal.

Individuals who were shown to be highly conservative appear less likely to show incongruence between their sexual identity and their lived experiences of sexual behaviour. In Wilson's (1973) description of the ideal conservative individual, he includes restrictions on sexual activity and intolerance of minority groups as two of the core attitudes of the true conservative. This may go some ways towards explaining the tendency amongst some more conservative individuals to exhibit sexual behaviour that matches their stated sexual identity.

A pattern of sexual behaviour kept in line with personal sexual identity matches well with the concept of cognitive dissonance. Contrast within the individual's sexual orientation would be expected to create cognitive dissonance (Schick et al., 2012), and thus these individuals may be encouraged to avoid discordant sexual behaviour.

Significant relationships between two variables, tolerance of ambiguity and sexual identity incongruence related to sexual attraction (present) and sexual fantasy (present and ideal),

followed expectations of individuals more comfortable with ambiguity. Individuals who are comfortable with uncertainty and ambiguity within their reality appear more likely both to engage in sexual fantasy that falls outside of their stated sexual identity, and to show a desire for such sexual fantasy. As deviating from their stated sexual identities may not represent as uncomfortable a premise to them as individuals who were less tolerant of ambiguity, they may be more willing to explore sexual fantasies outside their realm of experience. Considering further that sexual fantasy would seem to be amongst the more readily controlled of the sexual orientation facets, sexual identity incongruence related to sexual fantasy may stand as facets of sexual orientation which individuals more comfortable with ambiguity and the unknown are willing and able to explore.

Simultaneously however, there may be minimal impetus for them to choose to explore aspects of sexual orientation outside that which they identify with, leading to an insignificant relationship between tolerance of ambiguity and sexual identity incongruence in general. Although the uncertainty of deviations from their stated sexual identity may represent potential outlets of creativity, a trait common in individuals highly tolerant of ambiguity (Bors, Gruman, & Shukla, 2010), this on its own may not be sufficient to warrant significant numbers of individuals who are particular comfortable with ambiguous stimuli to choose to explore their sexual orientation in such a manner.

The third research question thus has some evidence to support a relationship between high levels of social conservatism and high levels of sexual identity incongruence. Similarly, some evidence for a relationship between tolerance of ambiguity and sexual identity incongruence seems to be shown. Of the four aspects of sexual identity incongruence (relating to sexual attraction, sexual behaviour, sexual fantasy and emotional preference) across three timeframes each (past, present and ideal), social conservatism showed significant relationships with one aspect of sexual identity incongruence (relating to sexual behaviour)

over two timeframes (past and present), while tolerance of ambiguity showed significant relationships with two aspects of sexual identity incongruence (relating to sexual attraction and sexual fantasy) over one (present) and two (present and ideal) timeframes, respectively.

Research question 4. The last research question of this study queried the strength of relationships between sexual identity incongruence and high levels of biphobia (as in the previous hypothesis), in comparison to the strength of the relationship between high levels of biphobia, and intolerance of ambiguity and high levels of social conservatism.

Multiple linear regression analyses were run for both components of the ARBS, Stability and Tolerance. Social Conservatism was found to be the strongest independent contributor towards both components of the ARBS, while Tolerance of Ambiguity was also demonstrated to contribute towards ARBS: Stability.

The beta values from the multiple linear regression analyses for attitudes regarding bisexuality confirmed the previous findings of a significant negative correlation between social conservatism and improved perceptions of the moral acceptability of bisexuality, and significantly and negatively and with increased acceptance of the legitimacy and longevity of bisexuality as a sexual orientation.

Compared to social conservatism, tolerance of ambiguity does not appear to have been reported in relation to biphobia as extensively. Yost and Thomas (2012) make the suggestion of the exploration of tolerance of ambiguity in relation to biphobia, and the findings of this study provide some validation of their indication. Individuals more highly tolerant of ambiguous stimuli within their realities were shown to be more likely to both exhibit more accepting views on the morality of bisexuality, and to view bisexuality as a more stable sexual orientation.

The demonstration of social conservatism as a more influential independent factor than tolerance of ambiguity in influencing attitudes regarding bisexuality in some ways matches the extent of both variables within literature relating them to biphobia. While multiple authors cite the link between social conservatism and biphobia (Israel & Mohr, 2004; Ripley, Anderson, McCormack, Adams, & Pitts, 2011; Stover & Morera, 2007, as cited in Averett, Strong-Blakeney, Nalavany, & Ryan, 2011), a link between tolerance of ambiguity and attitudes regarding bisexuality has an apparent lack of literature supporting it.

Incongruence between people's sexual identity and other aspects of their sexual orientation were hypothesized to potentially contribute strongly towards increasingly negative views towards bisexuality. Although some connections were shown between these concepts as measured within this study, the multiple linear regression analyses demonstrated their lack of statistical significance in affecting attitudes regarding bisexuality, relative to social conservatism and tolerance of ambiguity. This contrasted with the primary influence that social conservatism had regarding both aspects of attitudes regarding bisexuality, and thereafter influence that tolerance of ambiguity demonstrated towards people's views of the legitimacy of bisexuality as a sexual orientation.

The absence of significant influence from the sexual identity incongruence scores according to the multiple linear regression analyses leaves the question of why this was the case. One possible explanation is the relative absence of sexual identity incongruence amongst this sample. The frequency distributions of the dichotomized scores indicated that the number of cases with no incongruence outnumbered those with some incongruence by 1.6 times in the most proportionate group (Past Sexual Fantasy), and as much as 6 times for the most disproportionate group (Ideal Sexual Attraction). A higher proportion of individuals showing incongruence between their sexual identity and other aspects of their sexual

orientation may have contributed towards a more significant relationship between these and attitudes regarding bisexuality.

The skewness of various attributes of the sample may also have contributed towards these findings. The sample favoured females, whites, and heterosexuals, and any of these groups may display attributes which could skew the results. The method employed in this study also relied on self-report of sexual identity to calculate scores relating to incongruity. Individual decisions on personal identification with various sexual orientation groups may be less influenced by social pressure to conform to societal norms than expected, and thus sexual identities may be more likely to be chosen in accordance with other aspects of sexual orientation, decreasing the probability of incongruence between the two. Hoang, Holloway and Mendoza (2011) looked instead at the average scores obtained from individual KSOG results, and used these to calculate sexual identity incongruence. Their concept of sexual identity was based in an average of the various aspects of sexual orientation, and may have afforded them a larger proportion of sexual identity incongruence scores.

Alternatively, it is also possible that sexual identity incongruence is simply not an important contributing factor to attitudes regarding bisexuality, especially relative to established factors such as social conservatism. Although there is undoubtedly some relationship between these two variables, it is possible that there are a range of other, more significant factors, whose influence on attitudes regarding bisexuality dwarfs the effects of cognitive dissonance due to sexual identity incongruence.

Experience with bisexuality. Additional findings demonstrated a link between negative attitudes regarding bisexuality and personal experiences with bisexuality. Individuals tending towards more bisexual ratings of their own sexual fantasy, as well as their past sexual attraction and ideal sexual identity, were more likely to exhibit favourable attitudes regarding the moral acceptability and stability of bisexuality as a sexual orientation. This was shown statistically through negative correlations between the absolute values of the distance of individual KSOG values from the midpoint (representing bisexuality) and the two facets of the ARBS, Stability and Tolerance.

This negative correlation demonstrates that the closer an individual lies towards the heterosexual and homosexual poles, the more likely they are to display negative attitudes regarding bisexuals. These negative attitudes focused more strongly on the moral acceptability of bisexuality, as ARBS: Stability only demonstrated one significant correlation with the absolute distance from bisexual scores, for sexual behaviour in the present timeframe ($p < .01$).

Hoang, Holloway and Mendoza (2011) refer to the long-standing existence of bisexual erasure and prejudicial attitudes towards bisexuality from heterosexual and homosexual communities, and this would appear to match the relationship demonstrated here between sexual orientation and attitudes regarding bisexuality. This history of prejudice reinforces the idea that other sexual orientation groups are more likely to have less favourable attitudes regarding bisexuality.

Mohr and Rochlen (1999) demonstrated that prior contact with bisexual persons had a positive effect on the attitudes regarding bisexuality for both homosexual and heterosexual populations. This would seem to mirror some of the suggestions from this study that personal experience of bisexual sexual orientation can be a predictor for more positive attitudes

towards bisexuality. This was only demonstrated to a limited extent within this study, however.

Correlations between the ARBS and the absolute distance of the KSOG score from the bisexual midpoint demonstrated an important pattern of particular relevance to exploring the factors influencing attitudes regarding bisexuality. The majority of the significant correlations were with ARBS: Tolerance, suggesting that individual sexual orientation may play some part in affecting the perceived moral acceptability of bisexuality. Those individuals who have experienced (e.g.) sexual attraction towards someone of both sexes, or (e.g.) sexual behaviour with members of both sexes, may be more inclined to be more accepting of bisexuality from a moral standpoint.

Tying this to previously established patterns of discrimination from heterosexual and homosexual populations, it may appear that bisexual erasure is less related to individual sexual orientation than biphobia. The prevalence of correlations between perceptions of the morality of bisexuality and individual distance from bisexuality in terms of the KSOG may suggest that individual sexual orientation may affect propensity towards levels of biphobia.

Demographic statistics. Demographic statistics demonstrated a link between race in terms of black and white individuals and the perceived legitimacy of bisexuality. White students were demonstrated to hold a very slightly more positive average perception of the stability of bisexuality as a sexual orientation, although this slight difference was demonstrated as statistically significant.

Racial effects appear to contrast with those seen in Mohr and Rochlen's (1999) paper on the development of the ARBS, where no significant difference was seen between black and white respondents. Although these authors noted significant differences reported in relevant literature for attitudes towards homosexuals, their study found no basis for racial differences

in attitudes regarding bisexuals. The difference seen in this study was relative to only the stability, and not the moral acceptability, of bisexuality, and the measured difference in average scores was a score a little over 10% higher for white than black students.

This contrast in attitudes regarding bisexuality according to race may be particularly important in the South African setting, where sexual minority groups face social prejudice in a number of settings. Considering the position of African tribal leaders who speak about deviation from heterosexuality as “unAfrican,” it is possible that cultural factors contribute towards more conservative views regarding sexual orientation.

Gender was not shown to have significant effects on attitudes regarding bisexuals within this study. The results for gender would appear to be in contrast with findings such as those by Yost and Thomas (2012), in which gender was found to be highly salient in measuring biphobia. Yost and Thomas (2012) reported that men tended to hold more negative attitudes regarding bisexuality, and more so towards bisexual men than bisexual women. Although this study did not make use of the separate questionnaires to measure differences in attitudes towards male and female bisexuals, both male and female respondents were represented in their attitudes regarding bisexuality as a whole in the study.

This may provide some suggestion of a differentiation between South African and American populations on the premise of gender-based differences in attitudes towards bisexuals. This is only an indication at present, however, and further exploration of the concept would be required to prove the point.

Sample. Although the sample was skewed towards an overrepresentation of females, age groups were approximately normally distributed over the limited range of ages within the sample, while racial data favoured white students over black students at an approximate ratio of 1.5:1. Other racial groups were represented in minority counts - 9 Indian, 4 Coloured, 1 Asian and 2 other out of a sample of 133.

The overrepresentation of females may have resulted in what the literature would suggest would be a potentially less negative attitude regarding bisexuality (Yost & Thomas, 2012). This study found no significant influence of gender on attitudes regarding bisexuality, but the skewed distribution of genders in this study presents the question of what the outcome might have been had males been more equally represented.

Synopsis

South Africa presents a stark contrast in approach to sexual minority groups. On a legislative level, South African citizens enjoy a constitution which includes specific clauses for the protection of individual rights on the basis of sexual orientation, amongst a myriad of other points. At a social level, hate crimes based on prejudice against sexual minority groups are prevalent.

Much of the research into prejudice against sexual minority groups has focused on homophobia, and those studies that have broadened their focus have often combined bisexual and homosexual populations together, diluting the unique issues salient to each particular population group. The most common term used to refer to prejudice against sexual minority groups is homophobia, and within this we can already see how bisexuality has been subsumed into homosexuality. Bisexuals face both similar and separate problems of prejudice to those faced by homosexuals, and addressing these prejudices requires insight into the factors which influence it.

This study aimed to investigate some of the potential factors influencing negative attitudes towards bisexuality, with particular focus on the effects of discrepancies within individual patterns of sexual identity in relation to other aspects of their sexual orientation - sexual attraction, sexual fantasy, sexual behaviour and emotional preference, specifically. The level of influence of sexual identity incongruence on attitudes regarding bisexuality would then be compared to the relative strength of influence of tolerance of ambiguity and social conservatism on attitudes towards bisexuality. These latter two variables have demonstrated links from previous literature, to attitudes towards bisexuality and homophobia.

A non-experimental, cross-sectional and ex-post facto research design was selected in order to accommodate the requirements of both the research questions and the time constraints of the research program. University students were approached in two major settings, although the study was open to any university age students. These groups were psychology undergraduate students at the University of the Witwatersrand, and student members of various LGBTQIAA student organizations which fell under the umbrella organization of the Kaleidoscope Youth Network.

Participants completed an online survey consisting of a demographic questionnaire, and four separate scales - the ARBS, the KSOG, the ToA, and the Social Conservatism Scale. The demographic questionnaire collected age, race and gender data; the ARBS provided scores measuring individual perspectives on the stability of bisexuality as a sexual orientation, and on the moral acceptability of bisexuality; the KSOG collected information on five aspects of individual sexual orientation - sexual identity, sexual fantasy, sexual behaviour, sexual attraction, and emotional preference; the ToA provided data on individual reactions to stimuli perceived as unfamiliar or unclear to the individual; the Social Conservatism Scale measures the degree to which individuals perceive uncertainties within

their reality as threatening (Maltby & Price, 1999), as well as their tendency to find comfort within the familiar and traditional aspects of their reality.

Tolerance of Ambiguity, Social Conservatism, and ARBS: Stability all showed approximately symmetric distributions with a platykurtic shape. This suggests that this population demonstrated scores which seemed representative of the general population, with a slight overemphasis of scores clustered around the average. Their overall level of tendency to tolerate uncertainty within their reality, of perceiving it as threatening and gravitating towards the conventional and familiar, as well as their views on the longevity and relative stability of bisexuality as a sexual orientation, were for the most part in line with that of the general population.

ARBS: Tolerance and all of the KSOG showed moderate to highly skewed distributions. The sample was shown to lean towards moral acceptance of bisexuality on the whole, despite most individuals falling outside of the bisexual spectrum. A large majority of respondents were heterosexual, while the next largest group self-reported as homosexual.

The first research question, exploring the relationship between Sexual Identity Incongruence and negative attitudes regarding bisexuality, presented statistically significant correlations between a number of sexual identity incongruence scores and attitudes regarding bisexuality. Past and present timeframes of the sexual identity incongruence scores were shown to be more commonly significantly associated with attitudes regarding bisexuality, potentially demonstrating the significance of lived experiences on the development of biphobia. Incongruence between sexual identity and sexual behaviour, sexual fantasy and emotional preference were all shown to be significant predictors of attitudes regarding bisexuality, with individuals with higher incongruence scores demonstrated to be more likely to hold views of bisexuality as morally acceptable and generally stable.

The fourth question explored the strength of relationship between Sexual Identity Incongruence and Attitudes Regarding Bisexuality as compared to the strength of the relationship between Attitudes Regarding Bisexuality and Tolerance of Ambiguity and Social Conservatism. The multiple regression analyses for ARBS: Stability and ARBS: Tolerance both revealed sexual identity incongruence scores to be insignificant predictors, while social conservatism was a significant predictor for both the moral acceptability and the perceived stability of bisexuality, while tolerance of ambiguity was also a significant predictor of the perceived stability of bisexuality.

The exploration of the second research question demonstrated a significant (if weak) correlation between high levels of tolerance of ambiguity and low levels of social conservatism, and decreased biphobia. The results for social conservatism are in line with previous research linking the concept to biphobia, homophobia, and general heterosexism, while the results for tolerance of ambiguity validate the suggestion of Yost and Thomas (2012) that it would be a relevant factor related to attitudes regarding bisexuality.

Analysis of data for the third research question found supporting and contradicting evidence within this study. Individuals with high tolerance of ambiguity were demonstrated to be more likely to show sexual identity incongruence in terms of their present sexual attraction, and their sexual fantasy in the present and ideal future. Individuals showing high social conservatism levels were demonstrated to be less likely deviate in their sexual behaviour from their sexual identities. These results were in line with what was hypothesized to be the case.

Additional findings suggested that personal experience with bisexuality was associated with more positive attitudes regarding bisexuality. Race in terms of black and white individuals was shown to be significant in influencing the perceived stability of bisexuality as a sexual orientation, with a significantly higher average score on the ARBS: Stability for

white than black individuals. Gender was not shown to be a significant contributing factor to attitudes regarding bisexuality. Findings for race and gender were contrary to previous findings demonstrated in similar research literature.

Limitations of the Study

Measuring sexual orientation. Despite its advantages as a tool for measuring sexual orientation, the KSOG is not without its shortcomings. Weinrich (2014a, 2014b, 2014c) explored the current conception of sexual orientation measurement which includes bisexuality, from its birth with the Kinsey Scale and the later KSOG, to more modern day conceptualizations of sexual orientation. Through a series of three articles exploring the past, present, and ideal future of multidimensional measurement of sexual orientation, Weinrich (2014a, 2014b, 2014c) laid out many of the pros and cons of the KSOG, its current use within academic research, and the ideals researchers might strive towards in future.

The reality of sexual orientation is a continuity, where people occupy not only the points on a seven -point scale, but also every degree of subtlety between these (Weinrich, 2014c). To ascribe each individual to a specific point along a finite spectrum is to reduce their individual sexuality so as to fit with a more statistically malleable format. Weinrich (2014b) further cites the lack of differentiation by sex within each facet of the KSOG as problematic, a fact that "just about everyone agrees [on]" (Weinrich, 2014a, p. 545). He noted a further problem with the rating system limiting each time period to a single rating (Weinrich, 2014b), which may reduce the fluidity that occurred within that timeframe to a single metric. He also gave particular emphasis to the difficulty in maintaining an "Ideal" timeframe with individuals who may self-identify as more sexually fluid, noting that their ideal might be less defined, and thus the researcher should allow for an "undefined" response.

A realistic measurement of sexual orientation should also take into account the multifaceted nature of erotic attraction. Diamond (2008) suggests arousability and proceptivity as two differentiated forms to explore; Hendrick and Hendrick (1986) proposed agape, storge, pragma, ludus, philia or eros, after the Greek distinctions in forms of love and lust; and Sternberg (1986) provided his own suggestions of passion, intimacy and commitment. Weinrich (2014a) encouraged the exploration of multiple forms of attraction, and suggests that the researcher merely choose which aspects to study and provide motivation for their selection.

A further limitation of the KSOG is its apparent emphasis on the sex of the individual answering the survey. Weinrich (2014a) proposed an approach he titled "Focus on the Beloved," which highlights the sex of the person who is the object of attraction, rather than the one who feels attracted to the object. This would allow for a clearer exploration of the sexual orientation of non-binary gender groups, who at present may present some confusion as to their own sexual orientation (e.g. a female to male transitioning transsexual who is attracted to men may be unsure to identify as homosexual or heterosexual). Weinrich (2014a) suggests a move away from traditional terms such as homosexual and heterosexual, which emphasize the sex of both the subject and object of attraction, to potential terminology such as androphilic (person of any sex who is attracted to men) or gynephilic (person of any sex who is attracted to women.

A final limitation of both the KSOG and many of the proposed modifications to it, or even the alternatives to it, is the sheer number of variables it provides. The information-rich needs of the clinician and the data-reduction requirements of the academic need to be balanced in the development of sexual orientation scales. This study was limited by the sheer number of variables produced by the KSOG, as the depth to which each of these variables can be explored is limited due to the number of variables.

In terms of the use of the KSOG within this study, the separation of timeframes for each of the KSOG variables presents a wealth of information which could easily be discussed more intricately than herein. At times this information was neatly packed into overall representations of each particular aspect of sexual orientation, rather than unpacked to carefully examine each of the distinct differences or similarities between timeframes within each aspect.

Sample. The sample population examined in this study was demonstrated to be heavily skewed in favour of females, Caucasians, and heterosexuals. Males, homosexuals and other racial groups were given varying degrees of representation in the sample group, but their relative absence damages the extent to which the results can be generalized to the South African population. Bisexuals were also severely underrepresented in this sample, which presents a lost opportunity to look at the differences in attitudes towards bisexuality between bisexuals and other sexual orientations.

Skewness of the sample group also applies to the demonstrated attitudes towards bisexuality. While it is encouraging to see such positive views on the stability and moral acceptability of bisexuality, this skewness impedes the desired research findings. A sample skewed in this direction is less likely to provide the sought associations with negative attitudes towards bisexuality, as they exhibit few of these themselves. Although their results provide insight into factors associated with positive attitudes towards bisexuality, it cannot be automatically assumed that a reversal in associated factors will be directly linked to increased negative attitudes.

The focus on a university student sample also reduces the ability of generalize the findings to a broader population, especially in a country where a large majority of people do not have any tertiary education. In a study aiming to explore the contributing factors to negative

attitudes towards bisexuality, an understanding of the broader population would be invaluable in addressing social and cultural prejudices.

Statistics. The skewness of the sample in terms of their scores on the KSOG also presented limitations in terms of the statistical analyses that could be run. A number of variables were reduced to simple dichotomies, displaying either the presence or absence of variables of interest (such as sexual identity incongruence). Although this aided in running more reliable statistics, it limited the depth of understanding that could be developed from more intricate datasets.

Personal. "It is a common assertion that scientists are so strongly constrained by their class, gender, and other characteristics that they cannot help but reach conclusions that advance the interests of people who possess that particular set of characteristics" (Weinrich, 2014a, p. 547). In this issue, every researcher may be tied to their research in some manner, but this would seem to apply all the more so when they are a member of the very population that their research is set to address**.**

Strengths of the Study

Measuring sexual orientation. The operationalization of the measurement of sexual orientation has been a question of continuous debate. Differences in the public conception of sexual orientation as strictly defined categorical boxes and research suggestions of fluidity and continuity within sexuality (Weinrich, 2014) leave the researcher with difficult decisions to make. If they choose to adhere strictly to traditional conceptions of sexual orientation labels, they run the risk of creating artificial associations between those and other research variables. If they attempt to operationalize a fluid conception of sexual orientation, their respondents may struggle to identify where they lie in terms of unfamiliar ratings, and perhaps feel that their personal sexual identity is not being represented properly.

The selection of the KSOG attempts to address both the realistic fluidity and socially constructed categorization of sexual orientation, by allowing for the selection of traditional labels, and also including interstitial options which allow for a wider variation of (and potentially more fluid) sexual orientation. Compared to a dichotomy of homosexuality and heterosexuality, or a trichotomy including bisexuality, this continuum is advantageous to observing more nuanced interactions with varying sexual orientations (Weinrich, 2014b).

The KSOG also addresses bisexual erasure, one of the common discriminatory practices faced by bisexual people. By seating heterosexuals and homosexuals at the far opposite ends

of the spectrum, it ensures that bisexuality retains a clear position on its spectrum of sexual orientation, and arguably the broader assignment of the three (Weinrich, 2014a).

Sample. Although the selection of university students presents difficulties in generalizing to the general public, Weinrich (2014a) found that the meanings of words related to sexual orientation, such as homosexual, heterosexual, and bisexual, are generally understood by university students in the way that the writer intended. This serves to potentially enhance the validity of the findings, as participants are less likely to have answered sexuality-focused questions in an inconsistent way.

Demographic options. The questions about gender was carefully inclusive of a much broader range of options than the generic male / female dichotomy, and the question on race included a very broad range of possibilities. Weinrich (2014a) indicated that this is a particular problem with surveys which do not cater towards gender minority groups, and so it seems fitting that research dealing with (amongst other prejudices) bisexual erasure, is making strides towards preventing erasure of other minority groups.

Proposed Future Research

The proposed hypothesis of an association between sexual identity incongruence and negative attitudes towards bisexuality received some support in this study, and there is evidence elsewhere to suggest a link of sorts. Hoang, Holloway, and Mendoza (2011) showed a negative correlation between sexual identity congruence and internalized biphobia. Although their conceptualization of the calculation of sexual identity congruence differed to that used in this research report, their demonstration of a remarkably similar correlation to that hypothesized in this study suggests that there may be further merit in the investigation of further variations on this theme.

Research within the sexualities frame should also endeavour to ensure that bisexual identities are not silenced within our own research (Barker & Landridge, 2008). The absorption of bisexuality within homosexual studies carries with it the risk of further bisexual erasure from the academic sphere, and should be considered carefully (Klesse, 2011). Researchers should also attempt to acknowledge both the contributions of traditional sexual identity research, as well as more radical queer theories (Barker & Landridge, 2008).

The applicability of tests such as the KSOG to the South African context could also be further explored, with perhaps a particular focus on developing test items which are easily understood by individuals without a tertiary education. This would aid in producing valid results from a larger and more representative selection of the population.

Future research endeavours should also attempt to address the shortcomings of sexual orientation research which conflates attraction to men with attraction to women (Weinrich, 2014a). Sexual orientation scales also need to be further developed to allow sexual fluidity to emerge in the data as an attribute of population members.

Although the differences between racial groups were not huge, examining differences between black and white populations in relation to attitudes regarding bisexuality may shed more light on the potential factors which lead to less tolerant attitudes regarding bisexuality amongst black people.

Recommendations for Addressing Attitudes Towards Bisexuality

In terms of addressing negative attitudes towards bisexuality, further research needs to be conducted with samples displaying more strongly negative attitudes towards bisexuality. The lives of bisexuals within the South African context could be explored with a qualitative analysis of their narratives, which might highlight the specific types of prejudices that South African bisexuals experience.

As a low tolerance of ambiguity was found to correlate with increased levels of negative attitudes towards bisexuals, addressing these attitudes may involve work towards building familiarity with bisexuality as a stable sexual orientation. Increased awareness of bisexuality as an alternative to heterosexuality and homosexuality might be introduced in school sexual education classrooms, where students are beginning to form an understanding of sexuality as a whole and how it might apply to them. Furthermore, a strong correlation was demonstrated between the perceived stability of bisexuality as a legitimate sexual orientation, and the moral acceptability thereof. This might suggest that efforts to introduce bisexuality as a stable sexual identity may have positive effects on the perceived moral acceptability of bisexuality.

A moderate correlation between highly conservative views and negative attitudes towards bisexuality may suggest that highly conservative groups are the most likely place to find strongly negative prejudices against bisexual people. This may indicate particular populations to address, although this intervention would likely have to be targeted at a variable other than conservatism that is associated with negative attitudes towards bisexuality. Trubtt (1993) indicates that conservatism appears to rise as age increases, significantly so within the 50th year of life, and thus this might suggest the targeting both younger populations that may be more susceptible to preventative efforts, and older populations requiring interventions.

It seems apparent that individuals who tend more towards bisexual experiences within their sexual orientation, are more likely to be tolerant of bisexuality from a moral standpoint. This may suggest that personal experience with bisexuality, whether personal or through contact with bisexual people, may have a positive effect on attitudes towards bisexuality. Increased public exposure to individuals who identify as bisexual may thus be another tool in addressing attitudes towards bisexuality.

A focus on differences amongst age groups may also be worthy of future exploration, especially considering previous links between age and social conservatism and tolerance of

ambiguity. The sample group used for this study represented too small an age range to be of statistical significance, and could be expanded upon in future studies to bring this in as a additional demographic point of interest.

Conclusion

The theoretical and practical applications of this research were explored in this chapter. A relationship between increased sexual identity incongruence and decreased biphobia was shown, in contrast to the opposite trend which was projected from the study by Hoang, Holloway and Mendoza (2011). Tolerance of ambiguity and social conservatism were also shown to be more important than sexual identity incongruence in affecting negative attitudes towards bisexuality. High tolerance of ambiguity and low social conservatism were connected to lower levels of biphobia, as expected from various similar studies. Some aspects of sexual identity incongruence were also connected to tolerance of ambiguity and social conservatism, although not all aspects of the former showed significant correlations. As such, this research report presents no new evidence on the potential for cognitive bias within one's sexual identity to contribute towards increased biphobia, but (as with most investigations) provides new questions for future research to explore. Findings contrasted with international research on the effect of gender on attitudes regarding bisexuality, in that no significant impact was demonstrated by gender in this study. Tolerance of ambiguity and social conservatism were confirmed as factors which correlate with attitudes regarding bisexuality, in line with international research demonstrating the same tendency.

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Appendix A: Ethics Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: MACC/13/010 IH**
PROJECT TITLE:	Exploring negative attitudes towards bisexuality
INVESTIGATORS	Eccles Gregory
DEPARTMENT	Psychology
DATE CONSIDERED	08/04/13
DECISION OF COMMITTEE*	Approved

This ethical clearance is valid for 2 years and may be renewed upon application

DATE: 11 April 2013

CHAIRPERSON
(Professor Andrew Thatcher)

cc Supervisor: Prof. G Finchilescu
Psychology

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **one copy** returned to the Secretary, Room 100015, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure, as approved, I/we undertake to submit a revised protocol to the Committee.

This ethical clearance will expire on 31 December 2015

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix B: Participant Information Sheet

Psychology Department
School of Human and Community Development
University of the Witwatersrand
Private Bag 3, WITS, 2050
Tel: (011)717 4500 Fax: (011) 717 4559

Attitudes regarding sexual orientation and sexuality

Dear Sir/Madam

I am a student at the University of the Witwatersrand studying a masters in community-based counselling psychology.

You are being asked to take part in a research study on sexual orientation attitudes. Your participation in this study is completely voluntary. I am looking to explore the factors that affect attitudes towards sexuality and sexual orientation. I will be conducting this research under the supervision of Prof. Gillian Finchilescu, who is the head of the psychology department at the University of the Witwatersrand.

WHAT WILL HAPPEN

In this study, you will be asked to complete an online questionnaire regarding your own sexual identity, as well as some other aspects of your sexual orientation. You will also be asked questions regarding your level of agreement or disagreement with statements regarding conservatism, tolerance of uncertainty, attitudes regarding bisexuality, and also a number of demographic questions (age, gender, etc.).

The questions on sexual identity may be of a sensitive nature to some, and as such it is suggested that you answer the questionnaire in private. This will ensure that your confidentiality is maintained, and help us to obtain more honest answers.

TIME COMMITMENT

The study typically takes 15 minutes, and requires only one questionnaire to be completed.

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation. After you have clicked the "Submit" button at the end of the questionnaire

however, we will be unable to remove your results from the database, as all information submitted is completely anonymous. Please consider this carefully before submitted this data. If you do not wish to submit your information, you may simply close the questionnaire, or redirect your browser to another website.

You have the right to omit or refuse to answer or respond to any question that is asked of you.

You have the right to have your questions about the procedures answered, and I would be more than happy to assist you (unless answering these questions would interfere with the study's outcome). If you have any questions as a result of reading this information sheet, you should ask myself or my supervisor before the study begins.

BENEFITS AND RISKS

It is not anticipated that there will be any risk to you, but there is a small risk that you may be shocked or disturbed by some of the questions posed in this study concerning sexual identity and orientation. Should you feel the need to explore some of these issues further, the address for an online resource will be provided at the end of this document.

CONFIDENTIALITY/ANONYMITY

All data collected in this study will be kept completely confidential, and will not contain any personally identifiable information about you.

This data is intended for research purposes only. Some/all of the data may be published at a later date within academic journals, and within the academic resources of the University of the Witwatersrand.

Once again, we would like to emphasize that there will be no personally identifiable data collected or stored.

FOR FURTHER INFORMATION

Either myself or my supervisor, Prof. Gillian Finchilescu, will be glad to answer your questions about this study at any time.

If you want to find out about the final results of this study, you can contact either of us at the details below.

Yours sincerely

Mr Gregory Eccles (Researcher)
gregory.eccles@students.wits.ac.za

Prof. Gillian Finchilescu (supervisor)
gillian.finchilescu@wits.ac.za

ADDITIONAL RESOURCES

For information on bisexuality - The Bisexual Index - http://www.bisexualindex.org.uk/index.php/Bisexuality

For free telephone counselling - Lifeline

Appendix C: Demographics Questionnaire

1. What is your age?

2. What is your race?

   (a drop-down box with options was provided, including options for Black, Coloured, Indian, White, Arab, and Other)

3. What is your gender?

   (a drop-down box with options was provided, including options for Male, Female, Agender, FtM Transgender, MtF Transgender, Transgender, Intersex, and Other)

4. What year of study are you?

Appendix D: 12 Item Social Conservatism Scale

Please indicate whether or not you agree with each of the following items, by selecting “Yes”, “No”, or “Unsure”

	1 – No	2 – Unsure	3 - Yes
Death penalty	1	2	3
Multiculturalism	1	2	3
Stiffer jail terms	1	2	3
Voluntary euthanasia	1	2	3
Bible truth	1	2	3
Gay rights	1	2	3
Premarital virginity	1	2	3
Asian immigration	1	2	3
Church authority	1	2	3
Legalised abortion	1	2	3
Condom vending machines	1	2	3
Legalised prostitution	1	2	3

Appendix E: 12 Item Tolerance of Ambiguity Scale

Please select one rating for each of the following 12 items, where 1 means “Strongly Disagree” and 5 means “Strongly Agree”

	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
I avoid settings where people don’t share my values.	1	2	3	4	5
I can enjoy being with people whose values are very different from mine.	1	2	3	4	5
I would like to live in a foreign country for a while.	1	2	3	4	5
I like to surround myself with things that are familiar to me.	1	2	3	4	5
The sooner we all acquire similar values and ideals the better.	1	2	3	4	5
I can be comfortable with nearly all kinds of people.	1	2	3	4	5
If given a choice, I will usually visit a foreign country rather than vacation at home.	1	2	3	4	5
A good teacher is one who makes you wonder about your way of looking at things.	1	2	3	4	5
A good job is one where what is to be done and how it is to be done are always clear.	1	2	3	4	5
A person who leads an even, regular life in which few surprises or unexpected happenings arise really has a lot to be grateful for.	1	2	3	4	5
What we are used to is always preferable to what is unfamiliar.	1	2	3	4	5
I like parties where I know most of the people more than ones where all or most of the people are complete strangers.	1	2	3	4	5

Appendix F: The Klein Sexual Orientation Grid

Rate the items to follow (in bold) according to scale below. Descriptions of each item are listed below the table.

Other sex only	Other sex only	Other sex somewhat more	Both sexes equally	Same sex somewhat more	Same sex mostly	Same sex only
1	2	3	4	5	6	7

VARIABLE	PAST	PRESENT	IDEAL
Sexual Attraction			
Sexual Behaviour			
Sexual Fantasies			
Emotional Preference			

Past: Your life up to 12 months ago.

Present: The most recent 12 months

Ideal: What do you think you would eventually like?

Sexual Attraction: To whom are you sexually attracted?

Sexual Behavior: With whom have you actually had sex?

Sexual Fantasies: Whom are your sexual fantasies about? (They may occur during masturbation, daydreaming, as part of real life, or purely in your imagination.)

Emotional Preference: Emotions influence, if not define, the actual physical act of love. Do you love and like only members of the same sex, only members of another sex, or members of both groups?

Rate the items to follow (in bold) according to scale below. Descriptions of each item are listed below the table.

Heterosexual only	Heterosexual only	Bisexual mostly, somewhat heterosexual	Bisexual	Bisexual mostly, somewhat homosexual	Homosexual mostly	Homosexual only
1	2	3	4	5	6	7

VARIABLE	PAST	PRESENT	IDEAL
Sexual Identity			

Past: Your life up to 12 months ago.

Present: The most recent 12 months

Ideal: What do you think you would eventually like?

Sexual Identity: Which category do you personally identify with as your own sexual orientation?