

**THE RELATIONSHIP BETWEEN ADULT ATTACHMENT, PERCEIVED
DISCRIMINATION BASED ON SEXUAL ORIENTATION, AND DEPRESSION IN
LESBIAN STUDENTS, AND THE MEDIATING EFFECT OF PERCEIVED
DISCRIMINATION**

By

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Declaration of Originality

I declare that the mini-dissertation hereby submitted to the University of Limpopo, for the degree of Master of Arts in Clinical Psychology has not previously been submitted by me for a degree at this or any other university. All the material contained herein has been duly acknowledged.

.....
Signature

.....
Date

Dedication

This study is dedicated to:

- To my mother, grandmother, and two younger brothers.
- The memory of my late grandfather, uncle, and aunt.

Acknowledgments

I would like to express my gratitude to all the people who supported and contributed to the completion of this study.

- My supervisor, Prof Govender guided me throughout the research process. Prof Govender, I thank you for your support, guidance, and patience throughout the entire research process.
- My family and friends supported and prayed for me.
- The research participants who took part in this research made the completion of this study possible.

Abstract

The study investigated the relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effect of perceived discrimination at the University of Limpopo. Seventy-eight (N = 78) participants were conveniently recruited and through referral, participants completed an online questionnaire. The study used a cross-sectional, correlational research design was used within the quantitative research method. Convenience and snow-ball sampling were used as a method to choose/select participants. Bivariate analysis was conducted to investigate the correlation between adult attachment, perceived discrimination, and depression; therefore, the Pearson correlation coefficient was used for this purpose. The results of the study show that anxious attachment is negatively correlated with perceived discrimination, and the relationship is significant ($p < .000$), avoidance attachment is also negatively correlated with perceived discrimination, and the correlation between them is not significant ($p > .281$). The results also show that anxious attachment is positively correlated with depression and the correlation is significant ($p < .000$). The results also shows that avoidance attachment is positively correlated with depression and the relationship is not significant ($p > .083$). The study found that perceived discrimination based on sexual orientation partially mediated the relationship between adult attachment and depression in lesbian sample. The finding is consistent with existing literature and better explained through the attachment framework. However, it is further recommended that more research should be conducted in other universities and the general population with a broader LGBTIQ+ sample to explore the relationship between the variables.

Keywords: Adult attachment, perceived discrimination, depression, lesbians, anxious attachment, avoidance attachment

Acronyms

BDI: Beck Depression Inventory

CSCD: Centre for Student Counselling and Development

ECR: Experiences in Close Relationships Scale

EDS: Everyday Discrimination Scale

HIV: Human Immunodeficiency Virus

LGBTIQA+: Lesbian, Gay, Bisexual, Transgender, Intersex, Queer, and Asexual

TREC: Turfloop Research Ethics Committee

STI: Sexually Transmitted Infections

WHO: World Health Organisation

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1. CHAPTER ONE: INTRODUCTION

1.1. General introduction

John Bowlby's (1969, 1973, 1980) theory of attachment, a child and caregiver build a link that paves the way for future relationships (Popa-Velea et al., 2019). According to attachment theory, an adult's psychological distress and disorder can result from a pattern of dysfunctional relationships with attachment figures while they are still children (Scott & Cordova, 2002). Adult attachment empirical research has primarily focused on heterosexual people. Therefore, the application of attachment theory to homosexual individuals has received little attention. Few empirical research (Mohr & Fassinger, 2003; Shenkman et al., 2019) has employed the concept of attachment in Lesbian, Gay, Bisexual, Transgender, Intersex, Queer, and Asexual (LGBTIQA+) groups, thus earliest studies were included in the background and literature review. When it comes to reactions to perceived rejection from others, such as discrimination based on sexual orientation, adult attachment is essential in the LGBTIQA+ community (Zakalik & Wei, 2006). Thus, the current study aims to look at adult attachment, perceived discrimination, and depression levels in a sample of lesbians.

Research highlights that insecure attachment is linked to affective distress, including depression; similarly, secure attachment seems to act as a protective barrier against the psychological distress typically linked to major life stressors (Zhang et al., 2022). Given the recent literature data (Cook & Calebs, 2016; Gattis et al., 2014) that show the connections between an insecure attachment style, perceived discrimination, depression, and belonging to the LGBTIQA+ community, this topic seemed deserving of investigation. The evidence for some of these associations is more compelling, particularly when it comes to the higher prevalence of depression among LGBTIQA+ individuals or the association between anxiety and unstable attachment patterns (Popa-Velea et al., 2019). Categorical (secure, preoccupied, dismissing, and fearful) and dimensional (anxiety and avoidance) have been used to measure adult attachment. The dimensional attachment has been sufficiently explored in research which is then relevant from a clinical perspective, and more accurate compared to categorical attachment (Adams et al., 2018; Zhang et al., 2022).

Sexual orientation discrimination is defined as the belief that LGBTIQA+ individuals are treated differently or harassed because of their perception of one's sexual orientation.

Sexual minorities are faced with persistent hostility and discrimination (Glover, 2017). Discrimination was shown to be a moderating factor in a study conducted by Zakalik and Wei (2006) on a sample of gay males that found a link between depression and adult-related anxiety. When it comes to discrimination against gay men because of their sexual orientation, anxious-attachment gay men may be more sensitive than anxious attachment gay men. Depending on their adult attachment type, sexual minorities experience minority stress in different ways. People with anxious attachment are more prone to see stress as being substantially unpleasant and destructive to their well-being (Cook & Celebs, 2016). As a result, Dorin (2014) noted that adult attachment style has also been linked to people's responses to stress and their capacity for self-regulation.

Researchers in counselling psychology have drawn more attention to examining the moderators and mediators of the link between attachment and depression (Wei et al., 2005). Clinicians could create counselling interventions based on these factors, if such mediators or moderators are discovered, to lessen the depression that people with insecure attachments experience. Numerous mediators in the association between attachment and depression or stress have been covered in the attachment literature, such as dysfunctional attitude and self-esteem, self-concealment and self-splitting, perceived coping, maladaptive perfectionism, emotional reactivity, social competence, emotional cut-off, and emotional awareness (Malik et al., 2015). There has been less research conducted on the association between adult attachment and depression, and whether perceived discrimination based on homosexual orientation mediates the association (Zakalik & Wei, 2006). Therefore, Wood et al. (2019) noted that future research should unpack the association between depression, emotion regulation, discrimination, and attachment across various LGBTIQ+ communities.

According to Ramalepe (2019), there are an estimated two million LGBTIQ+ people in South Africa, of which 450,000 are estimated to be black. However, little is known about their positive psychological functioning. American scholarly research serves as the foundation for research on the LGBTIQ+ community, particularly black lesbian, and gay people (Ramalepe, 2019). In comparison to their White counterparts, Black, Native American, Asian, and Hispanic homosexual and bisexual men reported higher rates of racial, gender, and/or sexual orientation discrimination (Glover, 2017).

Although the recent and existing studies' literature focuses more on a Eurocentric perspective and not a black lesbian sample, the study intends to explore from the South African perspective whether perceived discrimination will mediate a relationship between adult attachment and depression in lesbians. According to Zakalik and Wei's (2006) research, expanding the attachment and discrimination literature would entail rerunning their analysis with a lesbian sample. Lesbian studies provide an intriguing contrast since lesbians face double discrimination based on their gender and sexual orientation.

1.2. Problem Statement

Black lesbians and gay people in South Africa are guaranteed the right to be free from discrimination under the constitution, and nothing is known about the welfare of this community (Ramalepe, 2019). Research on the experiences of black lesbians and gay people in South Africa with an emphasis on stigma consciousness and perceived discrimination is scarce. This is true even though there is growing proof that stigma consciousness and perceived discrimination are harmful to general well-being (Ramalepe, 2019).

Despite the rising acceptability of same-sex relationships, particularly among young people, and the inclusion of sexual orientation in many universities' anti-discrimination policies, students who identify as members of sexual minorities still experience stigma and discrimination. Interpersonal discrimination, especially among youth and students, has been linked in studies to poor mental health outcomes for sexual minorities (Woodford et al., 2014). Even though the LGBTIQ+ community has achieved significant progress toward equal rights in several countries; social stigma, discriminatory laws, policies, and practices mean that sexual orientation disparities in mental health remain a global issue (Huang et al., 2020).

Due to their minority status, LGBTIQ+ face challenges and are subject to stigma, prejudice, and discrimination. These difficulties may have a detrimental effect on gay and lesbian people's mental health. According to Meyer's (2003) minority stress theory, both distal stressors like bullying from family and peers and proximal stressors like having trouble accepting one's sexual orientation are linked to poor mental health outcomes like depression and suicidal ideation and attempts, anxiety disorders, and

alcoholism. When compared to heterosexual people, gay and lesbian individuals experience these mental health issues at higher rates (Meyer, 2003). Even while demands for greater study have been made, not much has been done on the part of attachment orientation in this correlation, even though during the past 20 years, the relationship between sexual orientation and mental health has drawn more attention from researchers (Shenkman et al., 2021).

The prevention of depression must be a major goal of Public Health programs, and this includes addressing depression in non-heterosexual people (World Health Organization [WHO], 2017). This is aligned to Sustainable Development Goal 3, 2030 which advocates for the promotion of mental health and well-being (Menne et al., 2020; Fernandez, 2020). Depression and anxiety are psychological indicators that are significantly correlated with the perception of prejudice based on sexual orientation. Globally, depression is the main factor in disability. Depressive symptoms levels are higher on with individuals who believe that crime was committed against them because of their sexual orientation, than those who believe it was a result of personal attack. As highlighted, these studies indicate a connection between psychological distress or depression and perceived discrimination based on sexual orientation (Zakalik & Wei, 2006).

Ramalepe (2019), lesbians and gays mental health has drawn the attention of researchers worldwide. In contrast, South Africa has a dearth of studies on their mental well-being. Despite years of research on lesbians specifically black lesbians, there is a gap in the literature. No study on this topic could be found at the University of Limpopo. This study seeks to explore the relationship between adult attachment, perceived discrimination based on sexual orientation, depression in lesbian students, and the mediating effect of perceived discrimination. The study seeks to close the gap in literature to explore the well-being of South African lesbians and the perceived discrimination that they experience daily and their attachment styles.

Minority stress refers to the experiences of stigma, rejection, and violence by most society as experienced by the minority. Minority stress theory posits that sociocultural prejudice and discrimination promotes minority stressors and stress and can have deleterious mental health implications for members of minority populations (Cook & Calebs, 2016). As previously discussed, stigma has been associated with the minority

status of individuals. Homosexuality as a minority status in predominately heterosexual society is often received with homophobic behaviour. It can be argued that homosexuality and stigma are synonymous (Ramalepe, 2019).

1.3. Aim of the Study

This study aims to investigate the relationship between adult attachment, perceived discrimination based on sexual orientation, depression in lesbian students, and the mediating effect of perceived discrimination.

1.4. Objectives of the Study

Table 1: Variables of the study

Independent Variable	Mediator	Dependent Variable
Adult attachment	Perceived discrimination	Depression

1.4.1. To ascertain the relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students.

1.4.2. To determine whether perceived discrimination will mediate a relationship between adult attachment and depression in lesbian students.

1.5. Hypotheses of the Study

1.5.1. There will be a positive relationship between anxious attachment, perceived discrimination, and depression, and a negative relationship between avoidance attachment, perceived discrimination, and depression.

1.5.2. The relationship between adult attachment and depression in lesbians will be mediated by perceived discrimination.

1.6. Operational Definitions of Concepts

1.6.1. Adult attachment

Fraley and Roisman (2019) define attachment as a powerful and enduring emotional bond between two people in which one person yearns for closeness and feels safer in the presence of the other. This is the definition adopted by the current study.

1.6.2. Depression

A mood disorder that results in a chronic sense of sadness and loss of interest. It can result in several mental and physical disorders and is commonly referred to as a significant depressive illness or clinical depression (Schnell et al., 2018). This is the definition adopted by the current study.

1.6.3. Perceived discrimination

Perceived discrimination is when people themselves perceive or experience discrimination (Straiton et al., 2019). This is the definition adopted by the current study.

1.6.4. Lesbian

The term "lesbian" is employed in this study to describe a woman who is emotionally, romantically, cognitively, and physically attracted to other women (Ilyayambwa, 2012). This is the definition adopted by the current study.

- Sexual orientation and gender identity encompass more than lesbians and gays. The research and literature cited in this study focuses on Lesbian, Gay, Bisexual, Transgender, Intersex, Queer, and Asexual (LGBTIQA+) identities. LGBTIQA+ is an evolving acronym.

1.7. Significance of the Study

This study will be beneficial, where the government might tighten the rules and laws that will ensure those lesbians and other individuals who are homosexual are accepted by the country as well as certain cultures that do not believe in same-sex relationships. The study will be significant in bringing understanding to adult attachment, perceived discrimination, and depression in the South African context. Clinicians could support their patients in understanding and changing the behaviours and thought patterns brought on by their attachment dimension. Clinicians can concentrate on dealing with the discrimination experience in a way that lessens its impact on depression levels,

though, if perceived discrimination is a mediation variable (Zakalik & Wei, 2006). The study contributes to the literature of the LGBTIQ+ community on their mental health, everyday life experiences (discrimination), and attainment styles.

1.8. Summary

This chapter presented the introduction of the study and the problem statement to be investigated. This chapter also outlined the main aim of the study, hypotheses of the study, operational definitions of concepts, and concluded with the significance of the study.

2. CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter consists of a literature review, which gives an overview of research that has been conducted in recent years on studies like this one. This chapter will cover the literature on perceived discrimination and attachment, perceived discrimination and depression, attachment, and depression, and cover attachment, perceived discrimination, and depression.

2.2. Perceived discrimination and attachment

Attachment theory has been used to understand how people relate to one another, themselves, and their environment. Despite the similarities amongst those who are heterosexual and non-heterosexual, there are minority stressors that are unique to the LGBTIQ+ group, such as discrimination, that need to be examined from an attachment perspective (Wix, 2012). Research in adult attachment that has applied attachment theory to sexual minority individuals suggests that early attachment styles might play a pivotal role in understanding the overall health of LGBTIQ+ as well as understanding their reactions to perceived social support, perceived rejections, and forming romantic relationships (Palangi, 2020). Empirical and theoretical work on attachment includes efforts to understand how attachment processes affect how individuals respond to stress (Bryant, 2022). Experiences of discrimination and rejection lead to expectation and anticipation of negative regard. The stress and distress according to experiences of rejection may be especially impactful from close, long-lasting bonds and theoretically could alter dimensions of attachment (Bergey & Liponis, 2022).

Attachment researchers (Frelay et al., 2015; Lavy, 2017) who investigate attachment often split it into two orientations, known as secure attachment and insecure attachment (anxiety and avoidance) (Shenkman et al., 2021). Those with secure attachment are better able to maintain emotional equilibrium when faced with adversity than those who are anxiously attached (Bowlby, 1973), who tend to turn to emotionally charged coping strategies that exacerbate pain and impair emotional regulation (Mikulincer & Shaver, 2019). Individuals who exhibit higher levels of attachment

avoidance typically utilize more independent coping strategies under stressful circumstances and are less likely to trust others when they are in need (Shenkman et al., 2021). Conversely, individuals with attachment anxiety are more emotionally reactive to stress and are more likely to perceive rejection against their sexual orientation (Palangi, 2020).

Individuals with secure attachment also experience heterosexism, it could be that when they experience minority stress, they utilize coping mechanisms including seeking out support, which reduces perceived stress. Particularly among LGBTIQ+ samples, anxious attachment style has been linked to psychological distress and perceived discrimination (Collins & Levitt, 2021). These results affirm studies (Cook & Calebs, 2016, Sato et al., 2020) on attachment theory, found that anxious attachment individuals are more sensitive to rejection signs and depend on others for approval. This might cause them to sense a lack of social support, which makes it difficult for them to successfully recruit social support (Paetzold et al., 2015). According to Collins and Levitt (2021), research by Calvo et al. (2021) and Keleher et al. (2010) demonstrates that lesbians and gay men who exhibit greater avoidance attachment do not feel less social support than those who exhibit greater anxious attachment.

In a study, Mohr (1999) did not directly look at the connection between attachment and perceived discrimination in his study. Nevertheless, it was noted that individuals with various attachment styles react in ways consistent with their prototypical affect regulation strategies. Cooks and Calebs (2016) mentioned that those with avoidance attachment would be more prone to downplay the impact of discrimination and their need for emotional support from others. Conversely, those who suffer from anxious attachment would focus on their suffering, absorb the message, and go to others for emotional support. Therefore, further research is required to fully comprehend the relationship between attachment and the LGBTIQ+ experience (Cooks & Calebs, 2016).

Some people are likely to minimize or deny that discrimination has occurred, according to experimental research (Calvo et al., 2021), but other members of minority groups are extremely cognizant of adverse perceptions and are sensitive to negative feedback and cues of discrimination. Building from attachment research, Wix (2012) proposed that anxiously attached individuals with high levels of attachment anxiety should be

especially vigilant for environmental cues of discrimination, whereas people with high levels of avoiding attachment would be more likely to downplay or deny such experiences. According to Pachankis et al. (2015), discrimination experienced as an adult was positively correlated with emotion dysregulation among homosexual and bisexual males. Greater attachment insecurity and emotion dysregulation would be present in those who believed their traumatic experience to be connected to prejudice against LGBTIQ+ people (Keating & Mullar, 2020).

Stress and resilience are two interpersonal and intrapersonal factors that seem to be linked to attachment style (Walker et al., 2022). For instance, researchers have discovered that people with secure attachment styles are more resilient to stress, whereas those with insecure attachment styles are more vulnerable to stress and are more likely to experience dysregulation (Ditzen et al., 2008). Given that basic interpersonal connections, as demonstrated by attachment style, certainly influence coping behaviour and its efficacy (Dorin, 2014), this finding makes logical. People with avoidant and anxious attachments may be more likely to perceive threats because they believe the world is less safe. Minorities with insecure attachment patterns will thus probably be more susceptible to perceiving a danger. Additionally, sexual minorities with insecure attachments may be more vulnerable to perceived discrimination because of the heightened likelihood of discrimination faced by sexual minorities. Jafary and Ashrafi (2023) attachment dimensions may have a significant role in how homosexual men react to perceived prejudice.

2.3. Perceived discrimination and depression

The state of one's mental health and the prevalence of mental illnesses are also influenced by social, cultural, economic, political, and environmental factors. People who identify as LGBTIQ+ are among those who are more susceptible to mental health problems under circumstances (Utama, 2017). LGBTIQ+ people's psychological health can be significantly impacted by living in an oppressive, stigmatizing, and discriminating environment, particularly throughout adolescence (Giraud, 2021). Compared to other young individuals, this group has a significantly higher risk of experiencing depression, anxiety, PTSD, self-harm, and suicide. They, along with other

LGBTIQA+ people and groups, frequently experience harassment, stigma, and discrimination (Knight et al., 2017). Due to their status as a minority and the stress that comes with it, lesbians, gays, and bisexuals may experience issues with their mental and physical health. Mental health is impacted by perceived discrimination and the stigma associated with being a sexual minority (Purvis, 2017). Poor treatment and experiencing worse life outcomes than others can affect one's psychological well-being (Schmitt et al., 2014).

The minority stress model's underlying mechanism that predicts mental health issues in individuals who identify as LGBTIQA+ is discrimination (Sutter & Perrin, 2016). Although discrimination can happen to anybody, it frequently affects sexual minorities more than heterosexuals (Gattis et al., 2015). The victim of discrimination frequently feels as though they are the target of the discrimination (Giraud, 2021). Formal discrimination is linked to many detrimental health consequences, and perceived discrimination is just as harmful. In contrast, the perception, anticipation, and assessment of experiences as discriminatory (or potentially discriminatory experiences) are sufficient to cause problematic stress responses (Borgogna & McDermott, 2020; Trub et al., 2017). This is an important point to remember because perceived discrimination need not necessarily be linked to actual discriminatory experience. LGBTIQA+ persons have frequently been investigated for their perceived discrimination as a risk factor for mental health issues (Douglass et al., 2016).

Researchers (Hall, 2018; Ross et al., 2018) have looked at anxiety and depression in the lesbian community, but they have not identified how perceived discrimination, coming out, and poor self-esteem affect lesbians' feelings of depression and anxiety (Purvis, 2017). Research (Thoma & Hueber, 2013; Shankar & Hinds, 2017) has shown that poor health outcomes are linked to perceived discrimination (Ramalepe, 2019) and mental health problems (Liao et al., 2015). Past research (Jang et al., 2008; Wei et al., 2008) on the effects of perceived discrimination has looked at well-being in a variety of ways, including perceptions of control, self-esteem, concentrating on mood, and mental health symptoms (depression). Thus, there are good academic and empirical justifications that perceived discrimination is harmful to psychological well-being in general (Schmitt et al., 2014).

Cheref et al. (2018) perceived discrimination is associated with more depressive symptoms, suicidal thoughts, and attempts. According to Ramalepe (2019), studies by Pascoe and Smart Richman (2009) and Schmitt et al. (2014) that used meta-analysis revealed that the well-being of various stigmatized group is impacted because of perceived discrimination. The study by Schmitt et al. (2014) also demonstrates that discrimination based on sexual orientation had a larger detrimental impact than discrimination based on racism or sexism. Lesbians may experience psychological distress because of feelings of discrimination based on their sexual minority status, which may be worsened by feelings of discrimination based on ethnic and racial minority status (Purvis, 2017). Although racial discrimination was the primary emphasis of perceived discrimination at first, its scope has expanded to encompass other socio-demographic characteristics including sexuality and gender (Ramalepe, 2019). Perceived discrimination can operate as a stressor that can cause psychological discomfort by reducing a person's sense of worth, self-perception, and belonging (Han & Richardson, 2015).

According to Namkung and Carr (2019), there have been more studies (Sowe et al., 2017; Wang et al., 2018) evaluating perceived institutional or interpersonal discrimination based on sexual orientation and its association with various psychological and physical health indicators. Limited research (Popa-Velea et al., 2019) have examined the relationship between perceived discrimination and mental health among LGBTIQ+ people (Keating & Mullar, 2020), apart from one study on the association between perceived discrimination and attachment insecurity among gay males (Zakalik & Wei, 2006). Scientific studies (Lee et al., 2016; Slater et al., 2017) state that perceived discrimination is a strong predictor of LGBTIQ+ mental health issues.

2.4. Attachment and depression

Dagan et al. (2018), attachment theory offers a crucial framework for understanding the causes and progression of depressive symptoms throughout life. It also sheds light on the connections between different aspects of attachment and depression (Bergey & Liponis, 2022). Childhood attachment-related experiences, for example, may have a significant role in predicting later mental health (such as depression and anxiety) in adulthood (Zheng et al., 2022). Gazzillo et al. (2020) and Dagan & Bernad (2019),

attachment theory (Bowlby 1969, 1973, 1980) offers a paradigm for an integrated explanation of the interpersonal and cognitive processes linked to depression and depressive susceptibility. Preliminary research indicates that Bowlby's (1969) attachment theory provides a good theoretical approach to examine the etymology of depression and anxiety. There is a preponderance of data that implies interpersonal vulnerability characteristics impart risk for depression and anxiety (Agnello, 2019).

Depression is a serious, prevalent condition that has implications for people's physical, emotional, social, and economic well-being. Personality traits like attachment styles can be used to better understand how major depressive illness develops (AlAssadi, 2021). Additionally, studies show that attachment styles are consistent throughout life and that people with insecure attachment patterns have poorer physical and mental health (Riva Crugnola et al., 2021). According to Khadeni et al. (2019), people with insecure attachment styles are particularly prone to experiencing depressive and anxious symptoms. Additionally, research shows that insecure attachment is frequently linked to an increased incidence of depressive (Fonagy & Luyten, 2018) and anxious (Schimmenti & Bifulco, 2015) disorders in both children and adults. Insecure attachment is also linked to more severe depression in people who are clinically depressed (Chinvararak et al., 2021). Moreover, insecure attachment models are likely to make adults more prone to emotional suffering, notably depression (Dagan & Bernad, 2019 Gazzillo et al., 2020).

Researchers (Popa-Velea et al., 2019; Zakalik & Wei, 2006) have discovered a relationship between adult attachment and depression (AlAssadi, 2021). The primary personality traits that affect one's perceptions, emotions, defences, and interpersonal interactions are attachment styles (Ciocca et al., 2020). Insecure attachment development can also have a long-term depressive effect (Conradi et al., 2018; Dagan et al., 2018). Obeid et al. (2019), the primary personality trait that develops to influence personal viewpoints, emotions, defences, achievement development, and relationships are attachment styles. As a result, when a person has an insecure attachment, they may have negative thoughts that lead to the symptoms of a depressive illness (Huang et al., 2020). Depression is more susceptible to cognitions of insecure connection (AlAssadi, 2021).

Bowlby (1973, 1980) was the first to raise the connection between attachment insecurities and mental health, who proposed that a lack of secure attachment from early teenage years was associated with anxiety and depression in later life (Cook, 2013). Secure attachment is associated with lower levels of anxiety and depression, while attachment anxiety is associated with higher levels of both (Cook, 2013). Greater levels of attachment anxiety and/or avoidance in adults are known as adult attachment insecurity, and they are associated with a higher risk of psychopathology in adulthood, which includes anxiety, depression, relationship issues, and a decrease in well-being (Good, 2019). Because they are unable to find a safe haven in the outer world, people with attachment anxiety and attachment avoidance usually experience higher degrees of psychological distress or sadness (Worsley et al., 2019). In general, people with insecure attachments often feel more depressed than people with secure attachment (Bergey & Liponis, 2022). Prior research states that people with insecure attachment are more likely to experience depression because of the way they relate to others (Worsley et al., 2019).

Numerous research studies have linked adult attachment to depressive symptoms, although certain aspects of attachment, including attachment anxiety and attachment avoidance, have shown contradictory or conflicting results (Zheng et al., 2020) or mixed (Cook, 2013). Some studies (Garrison et al., 2012; Gnilka et al., 2013) have shown that anxiety and avoidance of attachment are both significantly and positively associated with depressive symptoms, whereas other studies (Gillath et al., 2011) found no significant associations between anxiety and avoidance attachment and depressive symptoms, while Riggs and Kaminski (2010) found that only anxious attachment, and not avoidance attachment has significant association with depressive symptom. Hence, Cook (2013) mentioned that the mechanism linking avoidance and depression might be different from the mechanism linking attachment anxiety and depression. In addition, Cook (2013) reported that Mikulincer and Shaver (2007) also noted that depression is typically more severe in anxious attachment than avoidance attachment.

Bergey and Liponis (2022) attachment may be particularly important in understanding the well-being of sexual-minorities individuals, and sexual minorities have both higher rates of insecure attachment and depression than heterosexuals (Cook & Calebs, 2016). Additionally, in LGBTIQ+ people, attachment insecurity strongly predicted worse depressive symptoms (Popa-Vela et al., 2019). LGBTIQ+ must comprehend the

complicated relationships between adult attachment, emotion dysregulation, and depression since research indicates that groups that identify as sexual minorities exhibit higher levels of depressive symptoms because of the stigma attached to that status.

Despite this, few studies have explicitly examined the relationships among sexual minority communities' attachment, emotion dysregulation, and depression (Wood et al., 2019).

Attachment theory has frequently been characterized as an emotion regulation theory because persons with various attachment styles develop different emotional coping mechanisms (Sándor et al., 2021). Individuals with low anxiety and avoidance attachment (secure attachment) have positive internal working models of both the self and others (Zheng et al., 2020), which helps them develop adaptive regulating techniques to deal with negative emotions (Pascuzoo et al., 2015). People with high attachment anxiety or avoidance, who frequently have negative internal working models of themselves or others, have a harder time developing the internal and external resources required to manage distress (Mikulincer & Shaver, 2018). As a result, these people use maladaptive coping mechanisms like hyperactivating or deactivating, which are ineffective in dealing with bad emotions (Mikulincer & Shaver, 2007). Insecure adult attachment is thus anticipated to have a strong correlation with depressive symptoms, in keeping with the extended cognitive vulnerability transactional stress model (Zheng et al., 2020).

According to Ramalepe (2019), researchers internationally have paid close attention to the mental health of lesbian and homosexual people. In comparison, there is not much research on well-being in South Africa. Most of the research on the LGBTIQ+ community in Africa, particularly in South Africa, has focused on Human Immunodeficiency Virus (HIV) and Sexually Transmitted Infections (STIs), especially among homosexual males (Shisana et al., 2014). Therefore, there are research factors that influence the mental health of lesbians and gays (Ramalepe, 2019).

2.5. Attachment, perceived discrimination, and depression

In the last thirty years, the idea of attachment (Bowlby, 1973) has emerged as one of the most significant conceptual frameworks for comprehending the differences in stress-response mechanisms and regulation processes among individuals with different

attachment dimensions, such as avoidance or anxiety (Mikulincer & Shaver, 2020). It is widely acknowledged that the most accurate methods for assessing adult attachment are the two continuous attachment dimensions of avoidance and anxiety (Vaillancourt-Morel et al., 2022). Attachment anxiety is characterized by an overwhelming need for acceptance from others and a fear of rejection or abandonment. The fear of interpersonal dependence or proximity is what characterizes attachment avoidance (Xue et al., 2018). It makes sense, more specifically, that gay men's connection insecurity and depressive symptoms may be made worse by their impression of discrimination by others based on their sexual orientation (Cook & Calebs, 2016).

The findings showed a strong positive association between perceived discrimination and attachment anxiety (Palangi, 2020). According to research by Butzer and Campbell (2008), people who experience increased attachment anxiety are probably going to be more susceptible to discrimination based on their sexual orientation. This finding aligns with attachment theory, which maintains that people who experience attachment anxiety usually have poor self-perception and frequently react hyper-vigorously to stress (Murray et al., 2021). This strategy causes people to pay more attention to apparent rejection signals like discrimination (Liao et al., 2015). Additionally, the current research showed that homosexual males with attachment anxiety are more likely to experience depression because they are more likely to notice discrimination signals (Mohr, 2016). These gay men with insecure attachment appear to be enduring more discriminatory treatment, which exacerbates their symptoms of depression, because of using a hyperactivation approach; focusing their attention to discrimination signals to protect themselves from mental suffering (Mohr, 2016). However, findings from earlier studies point to the possibility that insecure attachment might lead to a perception of the world as unsafe for homosexual men, making individuals with anxious or avoidant attachments more prone to depression when they experience prejudice (Skidmore et al., 2023). The greater frequency of perceived discrimination may operate to reinforce the perception of a dangerous environment, or the person may take in these unfavourable messages, which in turn raises levels of depression (Cook & Calebs, 2016).

There has not been any study directly linking the relationships between adult attachment, perceived discrimination, and measures of depression and psychological distress (Liao et al., 2015). However, based on the aforementioned literature it seems that those with attachment anxiety or avoidance may be more prone to perceive

discrimination and therefore display depression symptoms (Mohr, 2016). In other words, adult attachment dimensions and depression may be mediated by perceived discrimination (Popa-Vela et al., 2019). The association between attachment and depression or distress has been studied concerning several mediators, including selfconcealment, self-splitting, emotional awareness, emotional reactivity, and emotional cut-off (Malik et al., 2015). Adding to attachment anxiety and avoidance, depression is associated with perceived discrimination based on sexual orientation. A causal chain involving perceived discrimination may operate as a go-between (mediator) for depression and adult attachment. People who have attachment anxiety or avoidance may be more likely to experience discrimination and exhibit depressive symptoms. In other words, the link between adult attachment traits and sadness may be mediated by perceptions of discrimination (Cooks & Calebs, 2016).

2.6. Summary

A literature review was given in the chapter. The association between adult attachment, perceived discrimination based on sexual orientation, and depression is covered in the literature review. The theoretical foundation for the investigation will be covered in the subsequent chapter.

3. CHAPTER THREE: THEORETICAL FRAMEWORK

3.1. Introduction

This chapter will focus on explaining attachment theory and the applicability of attachment theory to the study. The chapter will give an expansion on attachment theory, internal working models, and attachment styles, and the model of the study that shows that perceived discrimination mediated a relationship between adult attachment and depression.

3.2. Attachment theory

Following the development of Bowlby's (1973) fundamental work known as attachment theory, attachment has been extensively studied across disciplines (Shen et al., 2021). According to Dorin (2014) and Adams et al. (2018), John Bowlby (1958) was the first to establish attachment theory. Zhang et al. (2022) attachment is a significant characteristic that may relate to both (a) individual variations in how people create intimate connections and (b) a particular kind of relational link between two people. The relationship between newborns and caregivers was the first emphasis of attachment theory, and attachment has previously been characterized as the emotional connection that develops between a caretaker and a child (Zheng et al., 2020). As a result, people develop relationships with their primary caregivers very early in life (Vowels et al., 2022). According to attachment theory, people develop relatively stable patterns of expectations, desires, feelings, and behaviours in interpersonal interactions because of repeated interactions with their primary caregiver beginning in infancy. These patterns also have a long-lasting impact on how their interpsychic organization develops (Mikulincer & Shaver, 2016).

According to Shen et al. (2021), attachment is characterised by a child's inclination to use their primary caregiver as a safe haven while they explore their surroundings. Scholars have discussed how early attachment is important for predicting adult intrapersonal traits such as emotion regulation and self-worth, and how attachment variation and adaptation across developmental stages examine interpersonal orientations, and overall psychological well-being (Wright et al., 2014). As a result, Bowlby hypothesized that the attachment system is mirrored in thoughts and

behaviours that result in seeking out proximity to attachment figures when it is activated by a danger (Adams et al., 2018). However, when one's attachment figures are not consistently present and encouraging, fears about one's social standing and other people's malign intents grow stronger, one feels less safe in interpersonal interactions, and one is less capable of overcoming dangers and obstacles (Mikulincer & Shaver, 2019).

According to Bowlby's (1969, 1973, 1980) idea, newborns have a biological predisposition to create specific ties with nearby loving adults (Carr et al., 2013). Since being close to important people is crucial to maintaining and re-establishing safety, it has been proposed that formative discrimination of attachment figures begins in infancy since being near important individuals is essential to preserving and reestablishing safety. Distinct patterns of cognition, mood, and behaviour develop in response to caregivers' sensitivity, availability, and responsiveness to newborns' need for closeness (Carr et al., 2013).

Early attachment experiences can shape how someone perceives the world and forms connections in the future, and early interactions between a kid and the child's primary caregiver serve as a model for the quality of a person's subsequent relationships (Dorin, 2014). According to attachment theory, negligent or abusive parenting lowers people's expectations for romantic relationships in the future (Worsely et al., 2018). One of the most popular conceptual frameworks for the investigation of individual variations in personality and social development is attachment theory. Numerous studies have been conducted on the effects of individual differences in attachment on emotion regulation and interpersonal behaviour patterns in adult relationships (Read et al., 2018).

3.2.1. Internal working models

Adult attachment security is the ability to reconcile the desires for autonomy and closeness in intimate relationships. It is believed that this ability is activated by internal working models of the self and others that were formed during early experiences with caregivers (Trub et al., 2017). With attachment theory, early experiences lead to self and other-centered cognitive schemas that are integrated into the attachment system (Read et al., 2018). The availability, dependability, and supportiveness of

attachment figures (models of others) and whether the self is deserving of attention, care, and support (models of self) are expectations and beliefs that serve as the foundation for Bowlby's internal working models, also known as cognitive schemas (Read et al., 2018). These internal working models are considered to affect how a person perceives, processes, and expresses emotions in all areas of life and act as a model for the growth of subsequent interpersonal connections (Read et al., 2018). Working models of oneself, one's partner, and relationships that are derived from frequent attachment-related interactions with primary caregivers, peers, and intimate partners during a person's life become internalized as parts of one's cognitions (Cock and Calebs, 2016).

The way individuals engage with the outside world, how they relate to others, and how they manage their emotions, are being influenced by internal working models. Internal working models have an immediate impact on adult functioning. Children's internal working models—cognitive/emotional representations of the self and others—can be especially impacted by their experiences with their parents (Zhang et al., 2022). For understanding oneself and others, cognitive representations, also known as internal working models, act as organizational frameworks, scripts, and prototypes. Internal working models are assumed to develop into cognitive structures that affect feelings, beliefs, and relationship expectations over time, becoming reinforced, stable, and challenging to alter (Wix, 2012). These models later emerge as a key element of personality structure and have an impact on people's expectations, feelings, and defence mechanisms, as well as how they behave in attachment relationships (Permuy et al., 2010). Attachment theory, early unsettling family interactions can lead to models of dysfunctional relationships that last until adulthood, affecting how people interpret and experience stressful interpersonal events (Permuy et al., 2010).

Early attachment connections' positive qualities are absorbed over time and develop into rather stable internal working models, or mental representations, of oneself and others that direct people's behaviour in interpersonal interactions (Vowels et al., 2022). One mechanism through which attachment patterns theoretically develop is through internal working models. Starting in early infancy, the responsiveness of children's caregivers influences their feelings of protection and security (Bergey & Liponis, 2022). Individuals are typically categorized as either securely or insecurely bonded based on internal functioning models. People who had caregivers who were readily available and

attentive to their needs in adulthood have stronger emotion control techniques and form stable attachments (Mikulincer & Shaver, 2016). These models serve as the basis for adult attachment patterns and have been shown to have an impact on how people manage their emotions throughout their lives (Murray et al., 2020).

The smooth, normal operation of the attachment system is facilitated by interactions with attachment figures who are perceptive to and receptive to one's closeness bids. These interactions also foster a sense of connection and security and help one develop constructive working models of oneself and others (Mikulincer & Shaver, 2019). Infants, however, may develop insecure attachment patterns, which include negative views of oneself as unlovable and others as unloving, when caregiving is inconsistent, inattentive, and/or marked by rejection and neglect (Dagan et al., 2018). Negative perceptions of oneself and others may then result in behaviours that are overly distant or demanding, increasing the likelihood of interpersonal conflicts real or perceived, and decreasing the availability of social support (Dagan et al., 2018).

3.2.2. Attachment styles

When measuring internal working models in adults, attachment anxiety and attachment avoidance are combined (Zhang et al., 2022). Two orthogonal dimensions known as attachment anxiety and avoidance, working models of insecure attachment are characterized (Worsely et al., 2018). According to Golshani et al. (2021), a person's predisposition to seek out a certain person's company and feel safer there is known as their attachment style. Bowlby's (1969) attachment theory, attachment styles are formed in the interaction between a child and a caregiver and remain views about oneself and others in adulthood (Vaillancourt-Morel et al., 2021). Adult attachment styles may be categorized into four groups: secure, dismissive, preoccupied, and terrified. However, further research indicated that adult attachment should be seen as a construct with two orthogonal dimensions: attachment anxiety and attachment avoidance (Chen & Dang, 2023; Zheng et al., 2020).

Adult attachment styles are not gender-specific (Shu et al., 2017). Several studies (Feeney & Fitzgerald, 2019; Kawamoto, 2020; Pallini et al., 2018) mentioned that attachment styles have a significant impact on how people make professional decisions and choose love partners, and predict how steadily people's behaviour, thinking, and

social interactions, and lives evolve. The internalization of the development of the cognitive, expectations and behavioural processes is fundamental to personality structure and attachment categories (Cowan et al., 2019). Bowlby was convinced that a child's inability to form a secure attachment to one or more people during their formative years was linked to their inability to form meaningful close relationships as adults; as a result, Bowlby believed that today's attachment styles would resemble those created during infancy (Golshani et al., 2021). People with high attachment security may maintain proximity maintenance (seeking comfort from an attachment figure) to maintain their ability to regulate their emotions because they can bargain and maintain supportive relationships and have a tendency to express more comfort in experiencing and expressing emotions effectively (Wood et al., 2019).

An insecure attachment style is determined by inconsistent or non-existent care, whereas a secure attachment style is impacted by experiences with trustworthy caring (Cock & Calebs, 2016). Secure attachment is defined by emotions of safety, trust in the ability to offer support and care when necessary, and confidence in one's capacity to do so (Trub et al., 2017). It is believed that early exposure to consistently attentive and responsive caring causes it. Because they may not have been exposed to the modeling of adaptive emotion regulation approaches, persons who are insecurely linked have a higher risk of developing poor emotion regulation patterns and eventual adverse effects on their mental health (Wood et al., 2019).

According to attachment research, attachment may be divided into three unstable orientations: attachment anxiety, attachment avoidance, and secure attachment orientation (Shenkman et al., 2021). In contrast to secure attachment, which helps people keep their emotional equilibrium in the face of hardship, anxiously attached persons frequently use emotionally charged coping strategies that worsen their discomfort and impair their capacity to control their emotions (Mikulincer & Shaver, 2016). In contrast to individuals who exhibit high levels of anxiety and avoidance, people who exhibit low levels of both are thought to be securely connected (Murray et al., 2020; Shen et al., 2021; Zheng et al., 2020). A considerably more secure connection is indicated by lower scores on the ECR's anxious and anxiety subscales (Mastropaolo, 2019).

The three primary types of attachment patterns are secure, anxious-ambivalent, and avoidant (Hooper et al., 2016, Keough et al., 2018). People who have close relationships with others are resilient, use adaptive emotional management skills, and maintain good health (Kawamoto, 2020). On the other side, those with insecure attachment may exhibit emotional instability, behavioural problems, social maladjustment, social retreat, social rejection, and cognitive impairment (Janowska et al., 2015; Simpson & Rholes, 2017). Aspects of attachment problems include avoidant and anxious behaviours as well (Dagnino et al. 2017). According to Dagnino et al. (2017), persons with avoidant attachment styles first misrepresent other people and find it difficult to establish relationships with them. As a result, they aim towards obnoxious self-reliance and emotional isolation from others. Studies (Janowska et al., 2015; Schierholz et al., 2016; Wu et al., 2018) have shown that children who experience physical abuse or maltreatment are more likely to develop depressive symptoms and an avoidant attachment style. Second, persons with an anxious attachment type want deep relationships but are concerned about how others might respond. They are preoccupied with interpersonal connections, need excessive closeness, and fear rejection or neglect (Hooper et al., 2016; Keough et al., 2018). People with anxious attachment may function less effectively and, in some circumstances, develop psychopathologies like depressive diseases due to negative internal working model (Dagnino et al., 2017).

Individuals with attachment anxiety typically employ hyperactivation affect management techniques in response to perceived threats, resulting in heightened emotional and behavioural reactivity (such as easier access to the past's negative memories) (Read et al., 2018). However, when people with attachment avoidance face stress, they frequently employ deactivation affect management techniques (such as emotionally distancing themselves from unpleasant memories (Nelson-Coffey et al., 2017). In empirical research on adult attachment, people with various attachment dimensions employ various and unique affect regulation techniques to deal with their sadness or distress (Gökda, 2021). It was discovered that emotional reactivity, a sort of hyperactivation strategy, rather than emotional cut-off, a type of deactivation, was the only approach that could explain the relationship between attachment anxiety, bad mood, and interpersonal issues. On the other hand, emotional cut-off, not emotional

reactivity, was the sole factor that mediated the link between attachment avoidance, bad mood, and interpersonal issues (Stevenson et al., 2017).

Attachment theory as the lens of the study, it was proposed that in the context of sexual orientation, unfavourable parental responses to a child's coming-out process may alter his or her working models of attachment, resulting in the adoption of a more avoidant perspective on the environment (Jackson & Mohr, 2016). In contrast to their heterosexual counterparts, LGBTIQ+ exhibit higher attachment avoidance (Nematy & Oloomi, 2016; Shenkman et al., 2019; Shenkman et al., 2021). Given probable links between higher attachment avoidance and minority stress, oppression, and discrimination (Jackson & Mohr, 2016), these changes were explained. Zakalik and Wei (2006) expected that homosexual men with anxious attachment of higher degree would be more likely to pay attention to discrimination based on their sexual orientation or other people's rejection on the attachment and LGBTIQ+ literature regarding attachment anxiety. Adult attachment style can influence how lesbians perceive discrimination. For instance, lesbians with anxious attachment style are more likely to perceive discrimination based on their sexual orientation as harmful to their well-being and sensitive to rejection, than those lesbians with less anxious attachment style.

3.3. Summary

This chapter explained attachment theory and the applicability of attachment theory in this study. The chapter gave an expansion on attachment theory, internal working models, and attachment styles, and the model of the study shows that perceived discrimination mediated a relationship between adult attachment and depression.

4. CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Introduction

The chapter outlines the research methods used in the study. This chapter discusses the research approach and design, sampling and area of study, procedure of data collection, data collection instruments, data analysis, and ethical considerations that are adhered to.

4.2. Research Approach and Design

The study adopted a quantitative research approach. The quantitative research approach is defined as the use of deductive methods in the research process to either confirm or disprove prior ideas. This type of research involves measuring variables and analysing connections between variables to uncover patterns, correlations, or causal links (Leavy, 2022). Moreover, the researcher adopted the correlational research design, where the researcher compared variables which are adult attachment style, perceived discrimination based on sexual orientation, and depression among lesbian students. This study was a cross-sectional study that was mainly used for population-based surveys. A cross-sectional study is frequently preferred because it is efficient and affordable, and data collection is quicker (Setia, 2016) and collects data at a single point in time; or takes a one-time snapshot approach (Neuman, 2011). This type of research design is valued for establishing associations between variables.

4.3. Sampling population and area of study

The practice of choosing several individual cases from a broader population is known as sampling (Leavy, 2022). Non-probability sampling was adopted as research participants were recruited to suit the area of investigation. Convenience sampling was used where participants were selected based on their availability (Taherdoost, 2016). Since a minority sample such as the LGBTIQ+ community may not positively respond to open invitations, snowball sampling was also explored as a sampling strategy. Snowball sampling is a sampling strategy in which one case organically leads to another (Leavy, 2022).

For this study, the researcher posted posters online on the "Keyaka" <allstudents@keyaka.ul.ac.za> e-mail portal and at the Student Health and Wellness Centre notice board and requested lesbian students to contact him if they are interested in taking part in the research (an email address was provided). The aims and objectives of the study were stated in the poster. The researcher also consulted specific sectors in the university to seek assistance in the recruitment process of the participants such as Health Promoters at the Student Health and Wellness Centre and the Gender desk that deals with the LGBTIQ+ community. It is envisaged that by using

the non-probability sampling technique of participants through recruitment and snowball, a sample of 78 participants were identified. The first participant was identified through the help of a Health Promoter at the Student Health and Wellness Centre. The participant was sent a questionnaire via personal email, and she shared the questionnaire to other participants via WhatsApp group. The inclusion criteria for this sample; any lesbian student registered at University of Limpopo. The excluding criteria for this sample; any lesbian student not registered at University of Limpopo.

As already indicated it is difficult to identify participants for a minority sample, a sample size of 78 for this study was deemed appropriate for statistical analyses adopting non-probability sampling. The sample was selected from the University of Limpopo student populace. The sample characteristics, consists of students from 18 and above in age, majority from rural domicile, and African ethnicity/race background. The University is situated in the Capricorn District of the Limpopo Province of South Africa, some 30 kilometers to the east of Polokwane City. The University of Limpopo student population is approximately 20 000, with a domination of African students.

4.4. Procedure of data collection

The online questionnaires were administered in English. The online questionnaire was created using Google form. The University of Limpopo's registrar granted permission to access the students. The office of the registrar facilitated student reach by granting access to the "Keyaka" <allstudents@keyaka.ul.ac.za> e-mail portal, where the questionnaire was dispatched to all students registered at the University of Limpopo, and other students reached out to the researcher and the researcher shared the online questionnaires via email. The online questionnaire had six (6) section, the first section (section 1) explained the study, indicating the procedure of completing the questionnaires, ensuring the anonymity of each participant and that participation is voluntary and they may withdraw from the study at any time with no consequences. Thereafter the second section (section 2) participants completed the consent form online on the questionnaire and then from section 2-6 participants were expected to rate their responses on the Experience in the Close Relationship Scale, Perceived Discrimination Scale, and the Beck Depression Inventory-II. The participants were also informed that should they experience any emotional distress when completing the

questionnaires, they can seek psychological intervention at the Centre for Student Counselling and Development or/ Psychology clinic. Once the data was collected, the researcher processed the data through Microsoft excel and it took less than 24 hours to process the data because of the sample size. Processing the data was very challenging as it was the first time the researcher undertaken such responsibilities.

4.5. Data collection instruments

The following questionnaires were used to collect data:

4.5.1. Demographic questionnaire

The researcher gathered information on participants such as age, level of study, faculty, domicile, and ethnic group.

4.5.2. Experiences in Close Relationships Scale (ECR)

An adult attachment was assessed using the ECR which assesses attachment behaviour in close relationships. It consists of 36 items and measures respondents' attachment patterns using two bidirectional subscales, namely their avoidance of closeness and intimacy as well as their worry about being rejected, emotions of jealousy, and fears of abandonment. Information regarding the four forms of attachment secure, preoccupied, dismissive, and terrified attachment is obtained by combining the avoidance and anxiety elements. In the current investigation, the continuous worried and avoidant subscales were used. The internal consistency of anxiety was 0.90 and that of avoidance was 0.91, supporting the validity of the ECR (Rawatlal et al., 2015). There is strong support for the convergent, discriminant, and predictive validity of this measure. Additionally, the anxiety scale has Cronbach's alpha scores of .93 and .95, and the avoidance scale has scored between .91 and .93. For this measure, these scores demonstrate excellent internal consistency reliability. The ECR-R has been successfully applied to a variety of forensic adult samples and cultural contexts (Barber, 2017). In the current study, the anxiety scale has Cronbach's alpha score of .90 and the anxious scale has Cronbach's alpha score of .92. Thus, the Cronbach's alpha score of ECR is .92 in the current study.

4.5.3. Perceived Discrimination

The Everyday Discrimination Scale (EDS) was used to measure perceived discrimination. The nine questions on perceived discrimination and the cause the participant attributes to the discrimination in the Everyday Discrimination Scale (EDS) (Williams et al., 1997). High levels of scale validity and reliability were present. The scale has been used in South Africa with good psychometric properties reported (Williams et al., 2008). Participants responded to the items on a scale from 1 (Almost every day) to 6 (Rarely) (Never). A lower score suggested that more discrimination was experienced by the respondent. The scale has a Cronbach's Alpha of 0.77 in a South African student sample which is a sufficient level (Isaacs, 2020). In the current study, Cronbach's alpha score of EDS is .82.

4.5.4. Beck Depression Inventory-II

The Beck depression inventory (BDI) II by Beck et al. (1996) was used to measure depression. It is a tool consisting of 21 items to assess the intensity of depressive symptoms. The score ranges from 0 (absence of symptoms) to 3 (severe symptoms) for each item. In a study by Makhubela and Mashegoane (2016), the scale had a total score of internal consistency at $\alpha = .84$. The scale measured the level of depressive symptoms in the study. In the current study, Cronbach's alpha score of BDI is .92.

4.6. Ethical considerations

4.6.1. Permission to conduct the study

Ethical clearance was sought and obtained from the Turfloop Research Ethics Committee (TREC) at the University of Limpopo before the commencement of the study (see Appendix 6). In addition, the researcher then sought and obtained gatekeeper permission to conduct the study. The gatekeeper's permission was subsequently obtained from the University of Limpopo registrar.

4.6.2. Informed consent and voluntary participation

Informed consent involves a way in which the researcher will let participants in the study be part of the study voluntarily and understand the possible risks involved, and their approval to be part of the study (Du Plooy et al., 2014). Section 1 and 2 of the questionnaire explained the objectives and informed participants about the nature of the research, as well as informed the participants about the purpose of the research so that participants make an informed decision to be part of the study. The researcher informed participants that participation in the study was not compulsory, so whenever they feel that they do not want to be part of the study anymore they can withdraw at any time.

4.6.3. Confidentiality and anonymity

When a study is conducted, it is very important to protect the confidential information of the participants and participants not to be identified (Magwa & Magwa, 2015). The researcher ensured that the collected data was protected and that unauthorised persons did not get access to the data, except the supervisor. Further, the researcher protected the names of the participants and, when it came to data presentation, assigned anonymous names to the participants.

4.6.4. No harm to the participants

Participants of the study should not be subjected to any harm, such as emotional, psychological, or physical (Leavy, 2022). The researcher has the responsibility to protect the participants from harm. Based on the nature of the study, the researcher on the consent form explained and advised the research participants to seek psychological intervention at the Centre for Student Counselling and Development (CSCD) or/ Psychology clinic who display adverse emotional reactions as result of the study.

4.6.5. Data management

The researcher ensured that the data was kept safe from unauthorised personnel. The researcher used encryption on the files on the computer, and the data was only shared

with the supervisor. Additionally, for confidentiality purposes, pseudo names (i.e. Participants 1) were used to protect the privacy of the participants. The informed consent and files were also named using pseudo names. The researcher did not share the data of the human subjects without the approval of the review board of the institution.

4.6.6. Beneficence and non-maleficence

The researcher ensured that participants were treated with respect, dignity, and sensitivity as well that their rights were protected. This was achieved by obtaining informed consent, ensuring confidentiality and anonymity as well as not exposing the participants to any risk or harm, and providing support or referrals to participants who may experience distress or harm during or after the study. In this way, the participants of the study were protected.

4.7. Summary

This chapter discussed the research methodology that was used in this study. It covered the research approach and design, sampling and area of study, procedure of data collection, data collection instruments, data analysis, and ethical considerations.

5. CHAPTER FIVE: RESULTS

5.1. Introduction

The chapter outlines the results of the study. The results of the study are presented in line with the study objectives and hypotheses. Demographic characteristics of the participants will be presented through quantitative data, with the use of tables and graphs, and the hypotheses will be tested.

5.2. The response rate to the questionnaire

In the current study, 78 participated, therefore a response rate of 100% was recorded. The questionnaires were distributed online through student emails. Health promoters

at the Student Health and Wellness Centre and Gender Desk assisted in encouraging students to complete the questionnaire.

5.3. Data analysis

Data analysis was performed using the statistical package R version 4.2.2. Mediation analysis using the SEM approach was performed with the aid of the R package Lavaan (Rosseel, 2012). Demographic characteristics data were presented in terms of frequencies and percentages. For continuous variables such as adult attachment, perceived discrimination based on sexual orientation, and depression scores, the researcher provided mean, median, minimum, maximum, median, and standard deviation. Bivariate analysis was conducted to investigate the correlation between adult attachment, perceived discrimination, and depression; therefore, the Pearson correlation coefficient was used for this purpose.

The structural equation modeling (SEM) approach was used to examine the direct and indirect effects of attachment on depression. A bootstrapping procedure based on 2000 bootstrap samples was used to estimate confidence intervals for the parameter estimates. All test results were interpreted using the computed p-values for the test statistic. Small p-values show a significant result while large p-values indicate a non-significant result. When testing using a 5% level of significance the result is significant if the p-value is less than 0.05.

5.4. Reliability testing

Table 2: Internal consistency of ECR

	Items	Sample	Cronbach's Alpha
ECR	36	78	.92

Table 2 indicates the internal consistency of ECR, with Cronbach's alpha of .92.

Table 3: Internal consistency of ECR subscale (anxiety)

	Items	Sample	Cronbach's Alpha
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Anxiety	18	78	.91
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Table 3 indicates the internal consistency of the ECR subscale (anxiety), with Cronbach's alpha of .91.

Table 4: Internal consistency of ECR subscale (avoidance)

	Items	Sample	Cronbach's Alpha
Avoidance	18	78	.92

Table 4 indicates the internal consistency of the ECR subscale (avoidance), with Cronbach's alpha of .92.

Table 5: Internal consistency of EDS

	Items	Sample	Cronbach's Alpha
EDS		978	.82

Table 5 indicates the internal consistency of the ECR subscale (avoidance), with Cronbach's alpha of .82.

Table 6: Internal consistency of BDI-II

	Items	Sample	Cronbach's Alpha
BDI-II	21	78	.92

Table 6 indicates the internal consistency of BDI-II, with Cronbach's alpha of .92.

5.5. Demographic characteristics

Section A of the study questionnaire inquired about the age, level of study, faculty, domicile, and ethnicity. The results below will be presented in the form of frequency tables and graphs.

Figure 1: Age of participants

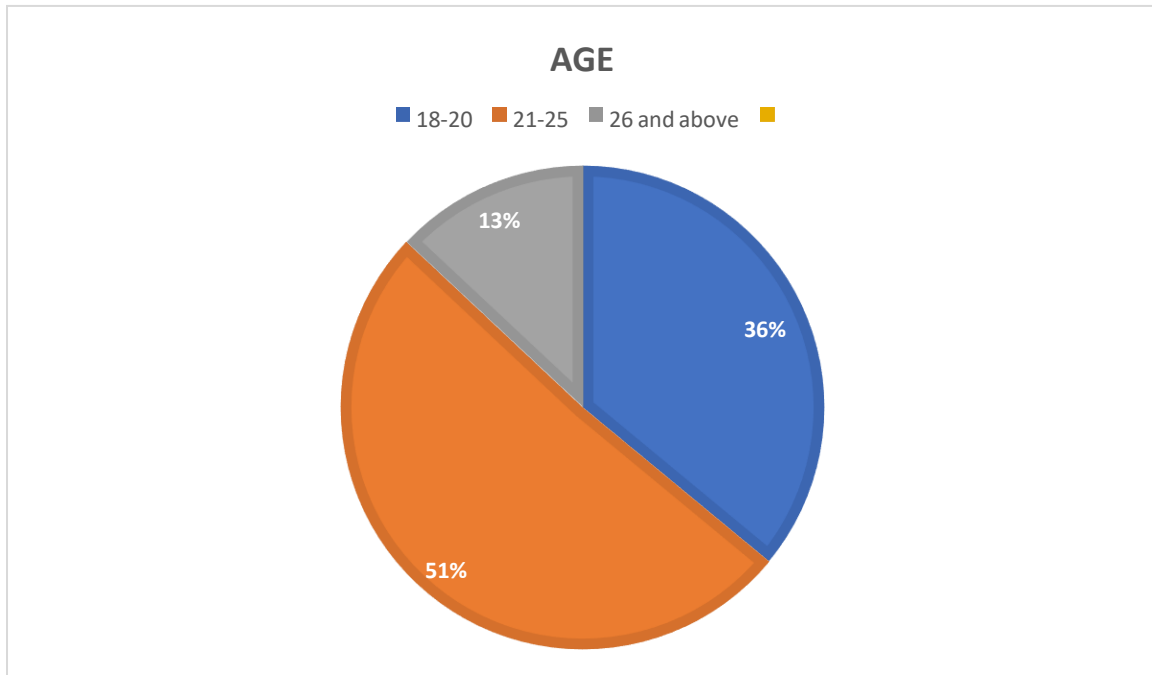


Figure 1 indicate that out of 78 participants, the largest group of participants was 21-25 years of age with a percentage of 51%, while the lowest group of participants was 26 and above years of age with a percentage of 13%.

Figure 2: Level of study

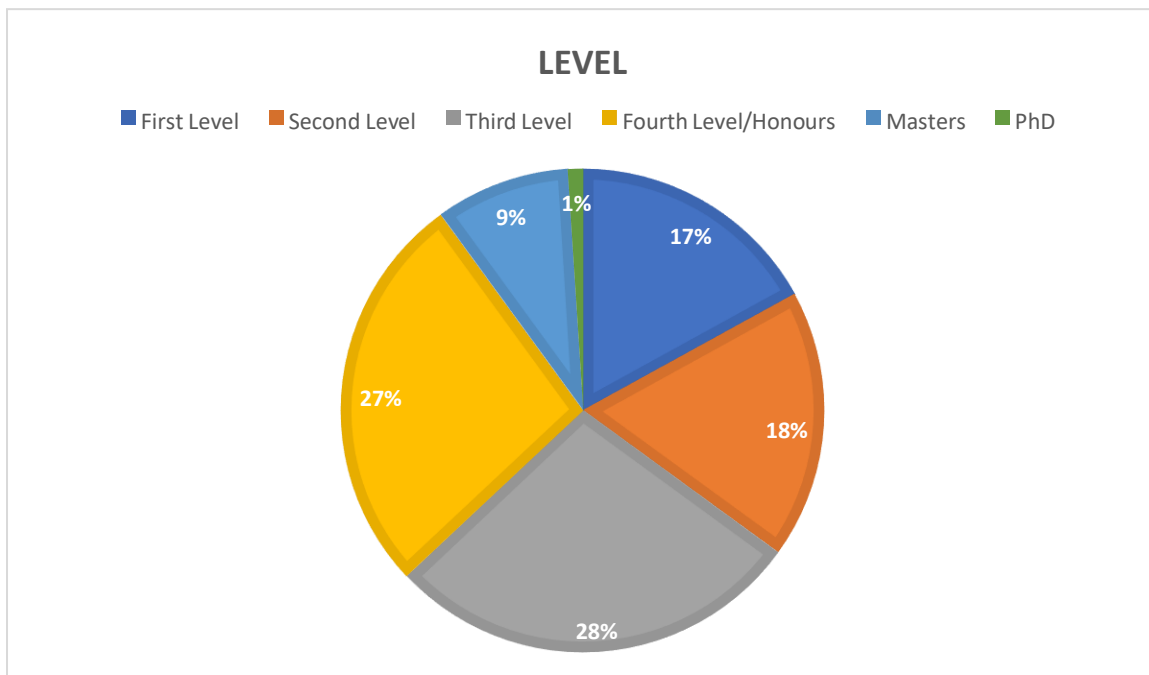


Figure 2 indicate that out of 78 participants, the largest group of participants their level of study is third level with a percentage of 28%, while the lowest is a participant who is currently doing PhD with a percentage of 1%.

Figure 3: Faculty

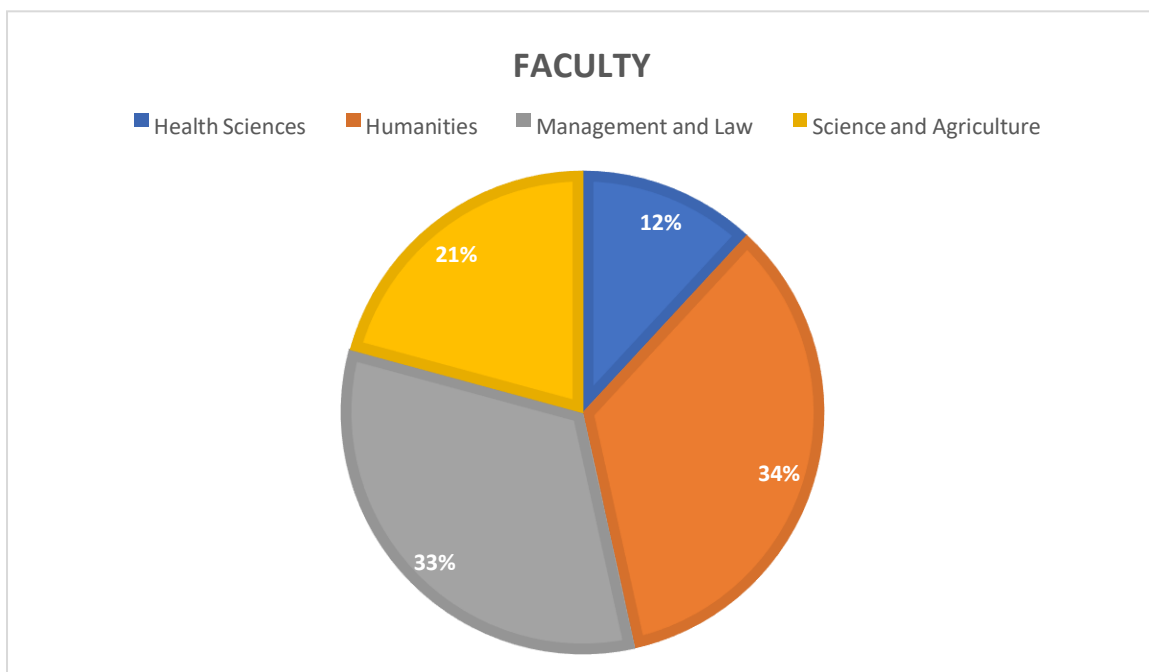


Figure 3 indicate that out of 78 participants, the largest group of participants are registered within the Faculty of Humanities with a percentage of 34%, while the lowest

group of participants are registered within the Faculty of Health Sciences with a percentage of 12%.

Figure 4: Domicile

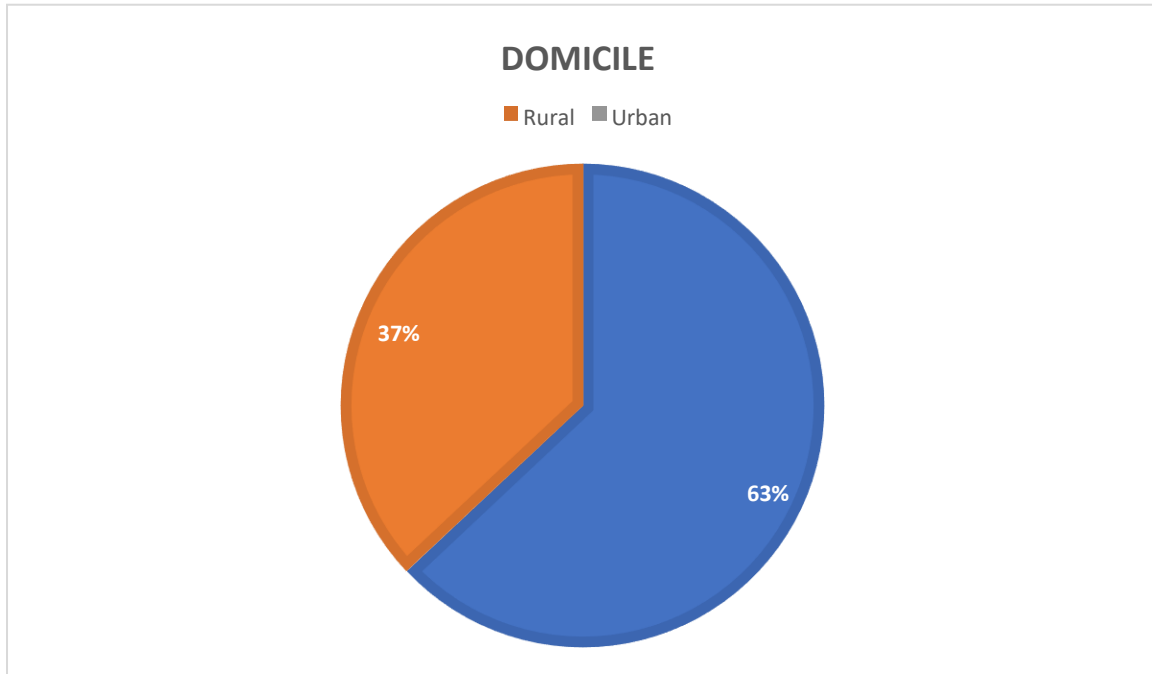


Figure 4 that out of 78 participants, the largest group of participants reside within the rural area with a percentage of 63%, while the other group resides within the urban area with a percentage of 37%.

Figure 5: Ethnicity

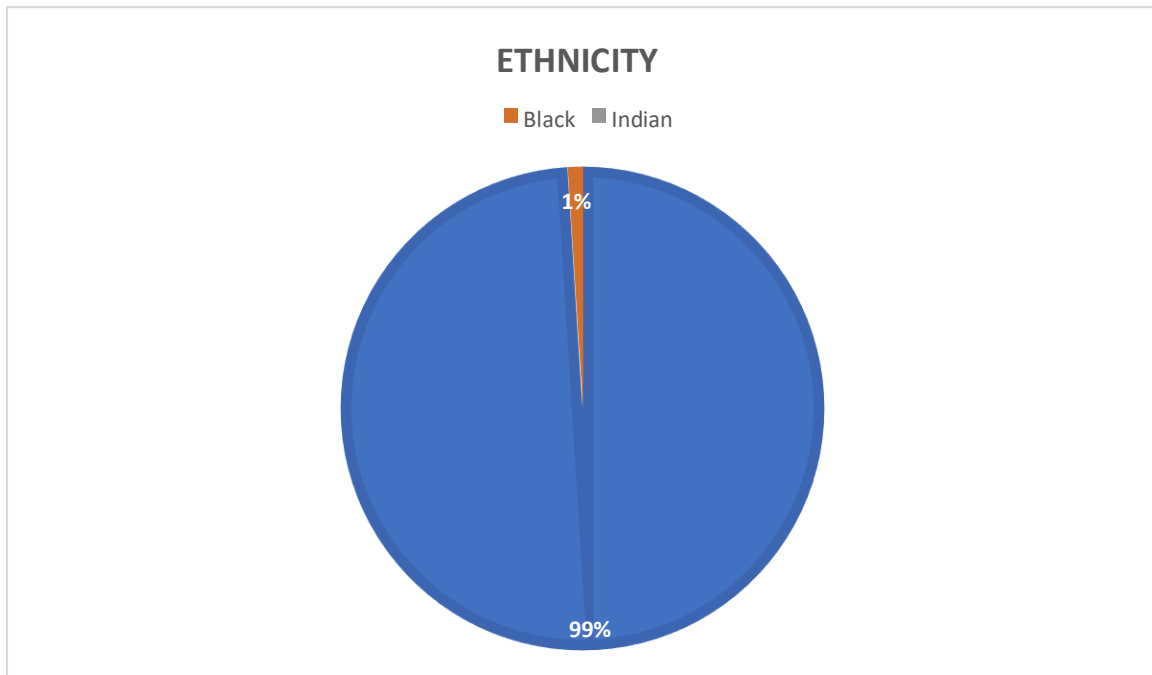


Figure 5 indicate that out of 78 participants, the largest group of participants is black with a percentage of 99%, while the other participant is an Indian with a percentage of 1%.

The summary statistics for the scales are presented below.

Table 12: Summary statistics

Scales	Mean	Median	Min	Max	SD
ECR	128.8	131	47	220	39.4
ECR subscale (anxiety)	66.7	70	18	117	24.8
ECR subscale (avoidance)	62.1	61	18	123	23.6
EDS	36.3	37	11	54	9.4
BDI-II	22.3	21.5	0	54	12.7

Table 12 indicates the summary statistics of the study scales. The table shows that ECR has a mean of 128.8 with a score that ranges between 47 and 220 and a standard deviation of 39.4. ECR subscale (anxiety) with a mean of 66.7, and the score ranges between 18 and 117, with a standard deviation of 24.8. ECR subscale (avoidance) with a mean of 62.1, and the score ranges between 18 and 123, with a standard deviation of 23.6. The above table also indicates that EDS has a mean of 36.3, and the score ranges between 11 and 54, with a standard deviation of 9.4. BDI-II has a mean of 22.3, and the score ranges between 0 and 54, with a standard deviation of 12.7.

5.6. Results of correlation between adult attachment, perceived discrimination based on sexual orientation, and depression

Table 13: Correlation Analysis

Variables	Mean	SD	1	2	3	4	5
1. Anxiety	66.7	24.8	1				
2. Avoidance	62.1	23.6	.33**	1			
3. Attachment	128.8	39.4	.82***	.80***	1		
4. PD	36.3	9.4	-.45***	-.11	-.35**	1	
5. Depression	22.3	12.8	.52***	.22*	.46***	-.42***	1

Abbreviations: SD = Standard Deviation; PD = Perceived Discrimination

Note: *** = 0.1% level of significance; ** = 1% level of significance; * = 5% level of significance.

Table 13 indicates results from Pearson's product-moment correlation coefficient that was computed to assess the relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students. There is a negative correlation between anxious attachment (anxiety) and perceived discrimination ($r = -.45^{***}$), and the relationship is significant ($p = .000$, see also Table 15). High anxious attachment appears to have a positive correlation with depression ($r = .52^{***}$), and the relationship is also significant ($p = .000$, see also Table 15). There is

a negative correlation between avoidance attachment (avoidance) and perceived discrimination ($r = -.11$), and the relationship is not significant ($p = .281$, see also Table 16). High avoidance attachment appears to be positively correlated with depression ($r = .22^*$), however, the relationship is not significant ($p = .083$, see also Table 16).

Table 13 above also indicates the correlational assessment of the adult attachment as a global attachment. There is a negative correlation between adult attachment and perceived discrimination ($r = -.35^{**}$), and the relationship is significant ($p = .000$, see also Table 14). Adult attachment appears to be positively correlated with depression ($r = .46^{***}$), and the relationship is significant ($p = .002$, see also Table 14).

5.7. Mediation analysis between adult attachment, perceived discrimination based on sexual orientation, and depression

Table 14: Mediation analysis between adult attachment, perceived discrimination based on sexual orientation, and depression

Variables	Estimate	Standard Error	P-value
Adult Attachment – Depression	.115	.037	.002
PD – Depression	-.405	.122	.001
Adult Attachment – PD	-.083	.020	.000
Indirect effect	.034	.013	.011

Table 14 indicates that there is a positive relationship between adult attachment and depression. The estimate of .115 indicates that as attachment increases by one unit, depression increases by .115 units. The p-value of .002 suggests that this relationship is statistically significant at a conventional significance level. There is a negative relationship between perceived discrimination and depression. The estimate of -.405 indicates that as the perceived discrimination score increases by one unit, depression decreases by .405 units. Considering that low values of the perceived discrimination score in the current study indicate more perceived discrimination, therefore, from the results as perceived discrimination increases depression also increases. The p-value of .001 suggests that this relationship is statistically significant.

Table 14 shows that there is a negative relationship between adult attachment and perceived discrimination. The estimate of -.083 suggests that as adult attachment increases by one unit, perceived discrimination decreases by .083 units. The p-value of .000 indicates a statistically significant relationship. The p-value of .011 indicates statistical significance for the indirect effect of adult attachment on depression. Since the p-value for the direct path is also significant, the conclusion is that perceived discrimination partially mediates the relationship between adult attachment and depression.

Table 15: Mediation analysis between anxious attachment (anxiety), perceived discrimination based on sexual orientation, and depression

Variables	Estimate	Standard Error	P-value
AnA – Depression	.212	.057	.000
PD – Depression	-.322	.0122	.008
AnA – PD	-.170	.036	.000
Indirect effect	.055	.023	.020

Abbreviation: PD = Perceived Discrimination; AnA = Anxious Attachment

Table 15 indicates that there is a positive relationship between anxious attachment and depression. The estimate of .212 indicates that as anxious attachment increases by one unit, depression increases by .212 units. The p-value of .000 suggests that this relationship is statistically significant at a conventional significance level. There is a negative relationship between perceived discrimination and depression. The estimate of -.322 indicates that as the perceived discrimination score increases by one unit, depression decreases by .322 units. Considering that low values of the perceived discrimination score in the current study indicate more perceived discrimination, therefore, from the results as perceived discrimination increases depression also increases. The p-value of .008 suggests that this relationship is statistically significant.

Table 15 shows that there is a negative relationship between anxious attachment and perceived discrimination. The estimate of -.170 suggests that as adult attachment increases by one unit and perceived discrimination decreases by -.170 units. The p-value of .000 indicates a statistically significant relationship. The p-value of .020 indicates statistical significance for the indirect effect of anxious attachment on depression. Since the p-value for the direct path is also significant, the conclusion is that perceived discrimination partially mediates the relationship between anxious attachment and depression.

Table 16: Mediation analysis between avoidance attachment (avoidance), perceived discrimination based on sexual orientation, and depression

Variables	Estimate	Standard Error	P-value
AvA – Depression	.096	.055	.083
PD – Depression	-.548	.0125	.000
AvA – PD	-.045	.042	.281
Indirect effect	.025	.024	.306

Abbreviation: PD = Perceived Discrimination; AvA = Avoidance Attachment

Table 16 indicates that there is a positive relationship between avoidance attachment and depression. The estimate of .096 indicates that as avoidance attachment increases by one unit, depression increases by .096 units. The p-value of .083 suggests that this relationship is not statistically significant at a conventional significance level. There is a negative relationship between perceived discrimination and depression. The estimate of -.548 indicates that as the perceived discrimination score increases by one unit, depression decreases by .548 units. Considering that low values of the perceived discrimination score in the current study indicate more perceived discrimination, therefore, from the results as perceived discrimination increases depression also increases. The p-value of .000 suggests that this relationship is statistically significant.

Table 16 shows that there is a negative relationship between avoidance attachment and perceived discrimination. The estimate of -.045 suggests that as avoidance attachment increases by one unit and perceived discrimination decreases by -.045 units. The p-value of .281 indicates no statistically significant relationship. The p-value of .306 indicates no statistical significance for the indirect effect of avoidance attachment on depression. Since the p-value for the direct path is not significant, the conclusion is that perceived discrimination does not mediate the relationship between avoidance attachment and depression.

5.8. Summary

This chapter presented and discussed the results in line with the study's aim, objectives, and hypotheses. The results were presented through a quantitative approach, with the use of tables, and the tables were discussed as to what they entail. The researcher started with presenting the reliability of the scales and then went on to present the demographic characteristics of participants. The results of correlational and mediation analysis are presented and discussed.

6. CHAPTER SIX: DISCUSSION

6.1. Introduction

This chapter will focus on explaining and discussing the results that were presented in the previous chapter. The results will be explained and discussed concerning the literature review. The correlational analysis between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students will be discussed. Then followed by the mediation analysis between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students.

6.2. Correlational analysis between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students

Hypothesis 1: There will be a positive relationship between anxious attachment, perceived discrimination, and depression, and a negative relationship between avoidance attachment, perceived discrimination, and depression.

6.2.1. Anxious attachment and perceived discrimination

The current study hypothesized that there would be a positive relationship between anxious attachment and perceived discrimination. However, the results of the current study rejected the current study hypothesis. The results revealed that there is a negative correlation between anxious attachment and perceived discrimination. Thus, the result of the study is contrary to the study by Collins and Levitt (2021), which mentioned that the LGBTIQ+ sample with an anxious attachment style has a link with perceived discrimination. This is mainly because they are more emotionally reactive to stress and are more likely to perceive rejection against their sexual orientation (Palangi, 2020). Cook and Calebs (2016) and Sato et al., (2020), went further to mention that anxiously attached depend on others for approval and are more sensitive to rejection signs and especially vigilant for environmental cues of discrimination (Wix, 2012). According to Pachenkis et al. (2015), discrimination experienced as an adult was positively correlated with emotion dysregulation among homosexual and bisexual males. Greater attachment insecurity and emotion dysregulation would be present in

those who believed their traumatic experience to be connected to prejudice against LGBTIQ+ people (Keating & Mullar, 2020).

Additionally, Mastropaolo (2019) reported findings of Mohr's (2016) study that found that anxiously attached LGBTIQ+ individuals who experienced heterosexism did not report any form of distress. Mastropaolo (2019) went further to submit that anxiously attached LGBTIQ+ who did not report increased anger and fear due to discrimination, is that they are more likely to perceive discrimination, due to sensitivity to rejection. Therefore, those who suffer from anxious attachment would focus on their suffering and absorb the message.

The result of the current study contradicts Cook and Calebs (2016) who mentioned that a study by Zakalik and Wei (2006), on a sample of gay men found that gay men who are more anxiously attached are more sensitive to discrimination that is based on sexual orientation. Understandably, the abovementioned studies were conducted among participants located in Western, Educated, Industrial, Rich, and Developed (WEIRD) countries which actually might play an important factor in the reason why they contradict the results of the current study that used a sample from South Africa. Due to the availability of WEIRD research, several scholars often question its universal relevance in general, and representative of the African experience in particular (Adjei, 2019).

6.2.2. Anxious attachment and depression

The current study hypothesized that there would be a positive relationship between anxious attachment and depression. Thus, the result of the current study supported the hypothesis of the current study. The result of the current study found that there is a positive relationship between anxious attachment and depression. Cook (2013), mentioned that attachment anxiety is linked to greater levels of depression and depression is typically more severe in anxious attachment. This was supported by Good (2019), who mentioned that adult attachment insecurity (anxious attachment) is linked with high-risk depression in adulthood. The result of the current study is supported by the findings of the study by Wood et al. (2019) found that anxious attachment was significantly associated with emotion dysregulation, while emotion dysregulation mediates a significant relationship between anxious attachment and depression with the LGBTIQ+ sample. The study conducted by Set et al. (2016)

regarding the link between attachment styles and depression LGBTIQ+ supports the results of this current study. Set et al. (2016) found that anxious attached LGBTIQ+ individuals are diagnosed with depression more, because of features such as a negative identity model and needing constant approval from others. A study by Palangi (2020) found that anxious attachment was negatively and significantly associated with resilience. The study was the first to examine the relationship between anxious attachment and the resilience of the LGBTIQ+ population.

The result of the study found that the relationship between anxious attachment and depression was significant, this concurs with the findings of Zhang et al. (2020) and Zhang et al. (2022) that anxious attachment was more strongly related and linked to depressive symptoms. Another study by Vowel et al. (2022) found that anxious attachment is significantly correlated to depression, and Zhang et al. (2022) found that the relationship between anxious attachment and indicators of mental health was substantially larger. Scholars have discussed how early attachment is important for predicting adult intrapersonal traits such as emotion regulation and self-worth, and how attachment variation and adaptation across developmental stages examine interpersonal orientations, and overall psychological well-being (Wright et al., 2014). People with anxious attachment may function less effectively and, in some circumstances, develop psychopathologies like depressive diseases due to negative internal working model (Dagnino et al., 2017).

The results of the study and the abovementioned studies are consistent with attachment indicating that individuals with anxious attachment typically have a negative working model and employ hyperactivation affect management techniques in response to perceived threats, resulting in heightened emotional and behavioural reactivity (Read et al., 2018). With the negative internal working, people with anxious attachment may function less effectively and develop psychopathologies like depression (Dagnino et al., 2017). Emotional reactivity, a sort of hyperactivation strategy, rather than emotional cut-off, a type of deactivation, was the only approach that could explain the relationship between attachment anxiety, bad mood, and interpersonal issues (Stevenson et al., 2017). Anxiously attached individuals are preoccupied with interpersonal connections, need excessive closeness, and fear rejection or neglect (Hooper et al., 2016; Keough et al., 2018). Hence the result of the study shows that there is a positive relationship between anxious attachment and depression, and the relationship is significant.

6.2.3. Avoidance of attachment and perceived discrimination

The current study hypothesized that there would be a negative relationship between avoidance attachment and perceived discrimination. The result of the current study supported the hypothesis of the current study. The results of the current study found that the correlation between avoidance attachment and perceived discrimination is negative. A study by Mastropaolo (2019) reported the results and findings of a study by Mohr (2016) that was conducted on 82 LGBTIQ+ young adults about their attachment style. The results of the study by Mohr (2016) found that avoidantly attached LGBTIQ+ individuals when experiencing heterosexism reported feelings of anger and fear, and discrimination is perceived less. The results are supported by literature because avoidantly attached individuals rely on deactivating and distancing coping strategies. Past research by Wix (2012) also highlighted that avoidantly attached individuals downplay the impact of discrimination. Another past study conducted by Zakalik and Wei (2006) found that there is nearly zero correlation between avoidance attachment and perceived discrimination, due to deactivating and emotional cut-off as coping strategies.

Mohr and Fassinger (2003) found that LGBTIQ+ individuals with avoidance attachment hide their sexual orientation to the public. Such behavioural tendencies are self-protective (Winterheld, 2017). Sherkman et al. (2021) mentioned that people who are more attachment-avoidant tend to be less trusting of others in times of need and to use more self-reliant coping mechanisms in situations of stress (Mikulincer & Shaver, 2016). So, it could be understood that such behaviours of avoidantly attached individuals reduce the risk discrimination based on sexual orientation and rejection. According to Karantzas et al. (2023) and Mikulincer and Shaver, (2022), attachment theory explains that individuals with avoidance attachment had a caregiver that consistently rejected and denied them, and now they are characterized with high dependence, autonomy, and fear of interpersonal relationships. These individuals have an internal working model that entails a negative view of others and self and adopt an avoidant viewpoint of the environment (Mohr & Jackson, 2016).

6.2.4. Avoidance of attachment and depression

The current study hypothesized that there would be a negative relationship between avoidance attachment and depression. However, the results of the current study rejected the hypothesis of the current study. The results of the current study revealed that there is a positive correlation between avoidance attachment and depression, and the correlation is not significant. A study by Shenkman et al. (2021) supports the results of the current study and rejects the hypothesis of the current study. Shenkman et al. (2021) study was investigating the mediation role of avoidance attachment between LGBTIQ+ individuals and mental health. The study (Shenkman et al., 2021) found that LGBTIQ+ was associated with higher avoidance attachment, and avoidance attachment associated with depressive symptoms. Shenkman et al. (2021) mentioned that this study to their knowledge is one of the first studies to identify avoidance attachment as a mediator of mental health and explained more by avoidance attachment among LGBTIQ+. The study results and study by Shenkman et al. (2021) are consistent with Good (2019). Good (2019) mentioned that adult attachment (anxious attachment and/or avoidance attachment) is associated with psychopathology, like depression.

The association between avoidance attachment and depression has contradictions and mixed (Zhang et al., 2020; Cook, 2013). Gillath et al. (2011) found no significant associations between avoidance attachment and depressive symptoms, this supports the hypothesis of the current study. However, studies by Garrison et al. (2012) and Gnilka et al. (2013) found that avoidance attachment is significantly and positively associated with depressive symptoms, this supports the result of the current study. According to Kadir and Bifulco (2013), there is inconsistency in the literature about the type of insecure attachment (anxiety and/or avoidance) that is consistent with predicting depression. Thus, anxious attachment is highly related to depression, and avoidance attachment scores low. Struck et al. (2020) reported a meta-analysis of Dagan et al. (2018) that there is a significant level between depression and anxious attachment, compared to avoidance attachment. The meta-analysis is contrary to the results of the study. The meta-analysis (Dagan et al., 2018) is supported by a study by Vowel et al. (2022), the study found that avoidance attachment was not associated with mental health outcomes (depression).

6.3. Mediation analysis between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students

Hypothesis 2: The relationship between adult attachment and depression in lesbians will be mediated by perceived discrimination

6.3.1. Adult attachment, perceived discrimination, and depression

The current study hypothesized that perceived discrimination based on sexual orientation will mediate the relationship between adult attachment and depression. The result of the current study partially supported the hypothesis of the current study. The result of the current study shows that perceived discrimination partially mediates the relationship between adult attachment and depression. This current study investigated the relationship between adult attachment, perceived discrimination, and depression. A study by Cook and Calebs (2016) on the integrated attachment and sexual minority stress model concurs with the study results. The study mentioned that adult attachment style influences how sexual minorities perceive sexual minority stress. Sexual minority stress refers to experiences such as stigma and discrimination related to their sexual orientation (Wood et al., 2019).

The integrated attachment and sexual minority stress model Cook and Calebs (2016) mention that stigma and discrimination based on sexual orientation can negatively affect how LGBTIQ+ manage and cope with minority stressors and put them into greater chances of poor mental health. A study by Popa-Vela et al. (2019) mentioned that there are few studies (Zakalik & Wei, 2006) that investigated the relationship between discrimination and depression among LGBTIQ+. This study (Pope-Vela., 2019) then found that adult attachment insecurity predicts depression in LGBTIQ+. The abovementioned studies (Cook & Calebs, 2016; Wood et al., 2019; Pope-Vela., 2019) highlight the relationship between adult attachment, perceived discrimination based on sexual orientation, and depression. These studies show that adult attachment insecurity in LGBTIQ+ individuals tend to perceive discrimination, due to their internal working model, and then exposes them to poor mental health. This is consistent with attachment theory, Gökda (2021) and Bryant (2022) state that different attachment dimensions have different coping techniques for dealing with sadness or distress. Then Palangi (2020) states that adult attachment can be applied to understanding the overall health of LGBTIQ+ and their reaction to perceived

rejection.

There is research that shows variables that mediate a path that attachment insecurity influences mental health (Owens et al., 2018). A study by Wood et al. (2019) investigated whether emotion dysregulation mediates the relationship between adult attachment insecurity and depression among the LGBTIQ+ sample. The study found that anxiety and avoidance attachment predict depressive symptoms and that the attachment dimensions (anxiety and avoidance) contribute to emotion dysregulation in LGBTIQ+. The study then found that emotion dysregulation significantly mediates the relationship between adult attachment insecurity and depression among the LGBTIQ+ sample. A study goal by Zakalik and Wei (2006) was to investigate whether perceived discrimination mediates the relationship between adult attachment and depression in a gay sample. The results of this abovementioned study (Zakalik & Wei, 2006) concur with the current study results that perceived discrimination partially mediates the relationship between anxious attachment and depression.

6.4. Conclusion

The study sought to investigate the relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students. The recruitment of sexual minorities (LGBTIQ+) is difficult, thus, 78 participants were able to participate in the study. The study used the Experiences in Close Relationships Scale (ECR) which assesses attachment behaviour in close relationships, the Everyday Discrimination Scale (EDS) to measure perceived discrimination, and the Beck Depression Inventory-II to measure depression. The scales that were used were all reliable and valid for the current study.

The results of the study show that anxious attachment is negatively correlated with perceived discrimination. This is in contrast with too much-existing literature that anxious attachment is positively correlated with perceived discrimination. The results also show that anxious attachment is positively correlated with depression and the correlation is significant. The results of the study show that avoidance attachment is negatively correlated with perceived discrimination, and it is supported by existing literature and other literature that argues for the negative correlation. The results also show that avoidance attachment is positively correlated with depression and the relationship is not significant. This is in agreement with existing literature, the literature

shows that the correlation is negative. The results of the study show that perceived discrimination partially mediated the relationship between adult attachment and depression. Concerning the current study's theoretical framework, states that different attachment dimensions have different coping techniques to deal with sadness or distress, such as perceived discrimination based on sexual orientation, and that adult attachment can be applied to understanding the overall health of LGBTIQ+ and their reaction to perceived rejection. The results of the study will contribute to the existing body knowledge on adult attachment, perceived discrimination, and depression in LGBTIQ+ community.

6.5. Limitations of the study

The following are limitations that are associated with the current study:

- The study relied on a self-report method of data collection; therefore, this is subject to intentional distortion and difficult to validate the responses. For example, because it was a self-report the researcher cannot validate if all participants were all lesbians.
- The sample of the study was 78 participants. The study results and findings cannot be generalised, and they are limited because the study sample was homogeneous.
- There is insufficient research conducted on a similar topic in the South African context on the LGBTIQ+ population.

6.6. Recommendations

- More research should be conducted on adult attachment, perceived discrimination, and depression on LGBTIQ+ in the South African context.
- Future research should use a mixed methods approach for rich information about the experiences of LGBTIQ+ in the universities and the general population. The aim will be to extend the results of the current study. This approach would contribute valuable insight into attachment, perceived discrimination, and depression on LGBTIQ+ population.

- More research should be conducted with a larger sample of LGBTIQ+ to allow for more generalisations and better understanding within the LGBTIQ+ population.
- Future research should explore other variables that may play a role in mediating a relationship between adult attachment and depression in LGBTIQ+ population.
- Future research should be conducted in the universities and the general population to cover the remaining gap and limitations of this study.

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APPENDICES

Appendix 1: Invitation to participate

Research topic: **The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effects of perceived discrimination.**

Dear participant

My name is Ramotlhoa Sphiwe Ishmael. I am researching the above-mentioned study in partial fulfillment of the Master of Arts in Clinical Psychology at the University of Limpopo (UL). I am humbly requesting your participation in this proposed study. The main aim of the study is to investigate the relationship between adult attachment, perceived discrimination based on sexual orientation, depression in lesbian students, and the mediating effect of perceived discrimination. Moreover, consent should be granted to ensure the anonymity of participants. The data to be collected will be treated as confidential and the participant's name will not be linked to the study.

For your participation in the study, please pay attention to the following:

- All the answers are correct, which simply implies that there is no wrong answer.
- You are free to withdraw from the study at any time and there will be no consequences.
- As a participant in the study, your name will not be recorded or used in the study and the information you provide will be confidential.

For more information about the study or when having question(s) regarding being a participant in the study feel free to contact Ramotlhoa Sphiwe Ishmael or my supervisor Prof Govender.

Thank you for your anticipation and co-operation.

Yours sincerely

Ramotlhoa Sphiwe Ishmael

Signature:.....

2: Consent Form

RESEARCH TITLE: The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effects of perceived discrimination.

PROJECT LEADER: S.I RAMOTLHOA

I, hereby voluntarily consent to participate in the following research project **The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effects of perceived discrimination.**

I realise that:

- a) The study deals with my experiences with perceived discrimination based on sexual orientation and depression.
- b) The procedure/treatment/interview may hold some risks for me that cannot be foreseen at this stage.
- c) The Ethics Committee has approved that individuals can be approached to participate in the study.
- d) The aims and extent of the research and methods of the research project have been explained to me.
- e) The research project sets out the risks that can be reasonably expected as well as possible discomfort for persons participating in the research. An explanation of the anticipated advantages for myself that are expected from the research and alternative procedures that may be to my advantage.
- f) I will be informed of any new information that may become available during the research that may influence my willingness to continue with my participation.

- g) Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.
- h) Any questions that I may have regarding the research or related matters, will be answered by the researchers. You may contact my supervisor at: or myself at if you need more information or feel uncomfortable with the research process at any time.
- i) If I have questions about, or challenges regarding the study, or experience any undesirable effects, I may contact any member of the research team.
- j) Participation in this research study is voluntary and I can withdraw my participation at any stage.
- k) If any medical problem is identified at any stage during the research, or when I am vetted for participation, such condition will be discussed with me in confidence by a qualified person, and/or I will be referred to my doctor.
- l) I indemnify the University of Limpopo and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.
- m) Based on the nature of the study, the researcher explained and advised the research participants to seek psychological intervention at the Centre for Student Counselling and Development (CSCD) and/or Psychology clinic who display adverse emotional reactions as a result of the study.

3: Informed Consent

I hereby agree to participate in research concerning **“The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effects of perceived discrimination”**. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue, and that this decision will not, in any way affect me negatively.

Appendix

I have received the email address of a person to contact should I need to speak about any issues that may arise in this interview. I understand that this consent form will not be linked to the questionnaire and that my answers will remain confidential. I understand that, if possible, feedback will be given to me as the results of the completed research.

Signature of participant

Date

4: Letter for Gatekeeper Permission

Department of Psychology

University of Limpopo

Private Bag X1106

Sovenga

0727

Date:.....

The Registrar

University of Limpopo

Private Bag X1106

Sovenga

0727

Dear Sir/Madam

I hereby request to be granted gatekeeper permission to conduct a study at the University of Limpopo. **The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effects of perceived discrimination.** Participation by the student will be voluntary and can be terminated when one does not feel comfortable anymore. The responses by the participants will be strictly confidential.

Thank you.

Yours faithfully

S.I Ramotlhoa (Student)

Date:.....

Prof S Govender (Supervisor)

Date:.....

5: Scales

Section A: **Demographic questionnaire**

Instructions: The following section pertains to demographic information about yourself. Personal information will be kept strictly confidential; however, please note that any information will be published through the use of statistics.

1. How old are you?

18-20

21-25

26 and above

2. Level of study

First level

Second level

Third level

Fourth level/Honours

Masters

PhD

3. Faculty

Humanities

Health Sciences

Science and Agriculture

Management and Law

4. Domicile Rural

Urban

5. Ethnic group

Black

White

Indian

Coloured

Section B: **Experiences in Close Relationships Scale (ECR)**

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by circling a number to indicate how much you agree or disagree with the statement.

	<u>QUESTION</u>	1=Strongly Disagree.....7=Strongly Agree						
		1	2	3	4	5	6	7
1.	I'm afraid that I will lose my partner's love.	1	2	3	4	5	6	7
2.	I often worry that my partner will not want to stay with me.	1	2	3	4	5	6	7
3.	I often worry that my partner doesn't love me.	1	2	3	4	5	6	7
4.	I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6	7
5.	I often wish that my partner's feelings for me were as strong as my feelings for him or her.	1	2	3	4	5	6	7
6.	I worry a lot about my relationships.	1	2	3	4	5	6	7
7.	When my partner is out of sight, I worry that he or she might become interested in someone else.	1	2	3	4	5	6	7
8.	When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.	1	2	3	4	5	6	7
9.	I rarely worry about my partner leaving me.	1	2	3	4	5	6	7
10.	My romantic partner makes me doubt myself.	1	2	3	4	5	6	7

Section C: **Beck Depression Inventory-II**

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully. And then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

- 0. I do not feel sad.
- 1. I feel sad much of the time.
- 2. I am sad all the time.
- 3. I am so sad that I can't stand it.

2. Pessimism

- 0. I am not discouraged about my future.
- 1. I feel more discouraged about my future than I used to.
- 2. I do not expect things to work out for me.
- 3. I feel my future is hopeless and will only get worse.

3. Past Failure

- 0. I do not feel like a failure.
- 1. I have failed more than I should have.
- 2. As I look back, I see a lot of failures.

3. I feel I am a total failure as a person.

9. Suicidal Thoughts or Wishes

0. I don't have any thoughts of killing myself.

1. I have thoughts of killing myself, but I would not carry them out.

2. I would like to kill myself.

3. I would kill myself if I had the chance.

Section D: **The Everyday Discrimination Scale**

In your day-to-day life, how often do any of the following things happen to you?

1. You are treated with less courtesy than other people are.
2. You are treated with less respect than other people are.
3. You receive poorer service than other people at restaurants or stores.
4. People act as if they think you are not smart.

Recommended response categories for all items:

Almost everyday

At least once a week

A few times a month

A few times a year

Less than once a year

Never

Follow-up Question (Asked only of those answering “A few times a year” or more frequently to at least one question.): What do you think is the main reason for these experiences? (CHECK MORE THAN ONE IF VOLUNTEERED).

RECOMMENDED OPTIONS

1. Your Gender
2. Your Sexual Orientation

OTHER POSSIBLE CATEGORIES TO CONSIDER

1. A physical disability
2. Your shade of skin colour (NSAL)
3. Your tribe (SASH)

Other (SPECIFY) _____

Appendix 6: Ethical certificate



University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 3935, Fax: (015) 268 2306, Email: tukiso.sewapa@ul.ac.za

TURFLOOP RESEARCH ETHICS COMMITTEE
ETHICS CLEARANCE CERTIFICATE

MEETING: 26 SEPTEMBER 2023

PROJECT NUMBER: TREC/1543/2023: PG

PROJECT:

Title: The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effect of perceived discrimination
Researcher: SI Ramotlhoa
Supervisor: Prof. S Govender
Co-Supervisor/s: N/A
School: Social Science
Degree: Master of Arts in Clinical Psychology

PROF D MAPOSA
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE

The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

Note:

- i) This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.
- ii) Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.
- iii) PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.

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Appendix 7: Gatekeeping letter



**University of Limpopo
Office of the Registrar**

Private Bag X1106, Sovenga, 0727, South Africa

Tel: (015) 268 2407, Fax: (015) 268 3048, Email: Kwena.Masha@ul.ac.za/Retha.Balle@ul.ac.za

04 October 2023

SI Ramothoa

Email: 201601608@keyaka.ul.ac.za

Dear SI Ramothoa,

GATEKEEPER PERMISSION TO CONDUCT RESEARCH

TITLE: THE RELATIONSHIP BETWEEN ADULT ATTACHMENT, PERCEIVED DISCRIMINATION BASED ON SEXUAL ORIENTATION, AND DEPRESSION IN LESBIAN STUDENTS, AND THE MEDIATING EFFECT OF PERCEIVED DISCRIMINATION

Researcher: SI Ramothoa
Supervisor/s: Prof. S Govender
Co-Supervisor/s: N/A
School: Social Science
Degree: Master of Arts in Clinical Psychology

Kindly be informed that Gatekeeper permission is granted to you to conduct research at the University of Limpopo entitled: "The relationship between adult attachment, perceived discrimination based on sexual orientation, and depression in lesbian students, and the mediating effect of perceived discrimination".

Regards,

**PROF. JK MASHA
UNIVERSITY REGISTRAR**

Cc. Prof. RJ Singh: Deputy Vice-Chancellor, Research, Innovation and Partnerships
Prof. RN Madadzhe: Deputy Vice-Chancellor, Teaching and Learning
Dr. T Mabla, Director: Research Development and Administration
Prof. D Maposa – Chairperson: Research and Ethics Committee
Dr. T Sewapa, Ethics Officer
Ms. M Hlatshwayo – Assistant: Ethics Secretariat
Ms. C Ngobeni – Research Administration and Development

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