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“Presumed straight until demonstrated otherwise”:
The relationships between sexual identity,
heteronormativity, sexual identity development and
psychological well-being

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Abstract

The conceptualisation and development of a sexual identity has been debated in the literature. Whether identity is conceptualised as categorical or on a continuum, people with same sex experiences, such as those identifying as lesbian, gay, bisexual, questioning and other (LGBQ+), demonstrate lower psychological well-being than their heterosexually-identified counterparts. Some have argued this is a result of the stress associated with minority status; others comment on the influence of the development of a sexual identity divergent of the heterosexist norm. Literature supports both claims, yet inconsistencies exist in the study of the psychological outcomes of those with LGBQ+ identities. The current research intended to alleviate some of these debates with three foundational aims: to explore the placement of the sexual identity categories along the continuum, and incorporate more sexual identity categories in sexual identity assessment, demonstrating respect for diversity; to examine the differences in psychological well-being between people with different sexual identities and in different phases of development; and to investigate how dimensions associated with sexual identity, such as identity disclosure, influence these differences. To do this, the study utilized an online survey incorporating a number of measures. People with different sexual identities were significantly different along the sexual identity continuum. In addition, as suspected, non-binary identities (defined in this research as people not ascribing to either heterosexual or lesbian/gay identities) reported lower levels of well-being. When accounting for differences in identity-related factors, such as identity uncertainty and disclosure, several of the significant differences were eliminated, and all but one of the remaining significant findings demonstrated reduced effect sizes. Those in the Synthesis phase of individual and group identity development generally reported greater levels of psychological well-being. Once again, when controlling for identity-related factors these differences were reduced or eliminated. Future research should investigate a universal model of sexual identity formation, and should assess identity dimensions in those identifying as heterosexual. Gaining greater understandings in the experiences of people with LGBQ+ identities demonstrates areas to target for interventions in order to decrease the disparities which exist between people with these and heterosexual identities.

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Chapter 1: Introduction

Sexual identity development has been portrayed many times in pop culture through television shows and movies, such as Grey's Anatomy, South of Nowhere, Imagine Me and You, and Geography Club. Each portray the difficult nature of becoming aware of same sex attraction, and exploring these experiences despite a lack of acceptance by others and/or feelings of shame. Geography Club (see <http://www.imdb.com/title/tt2235902/>) is a film involving two high school boys from very different backgrounds struggling with their sexuality. The main character, Russell, comes from a nuclear family with a dad striving for his son to follow in his footsteps, including marrying a woman. Russell's main love interest is a football jock named Kevin, a boy with one of the few families in the city who are accepting of a gay sexual identity. In this movie, Russell moves through sexual identity development and develops self-acceptance, despite his conservative family. Kevin, on the other hand, who has an accepting family, was ashamed of his sexuality, stating "I don't want to be gay... I just want to be normal" (Entin, 2013, 67 - 68 minutes). This portrayal suggests the development of a gay or bisexual sexual identity is a difficult process, even in accepting environments. Pop culture depictions (i.e. those seen in books and movies) illustrate there are many factors involved in lesbian, gay, bisexual and other (LGB+) sexual identity development and how one's well-being may be impacted. This thesis had three foundational aims that have arisen from research literature and pop culture portrayals such as Kevin from Geography Club: to investigate the conceptualisation of LGB+ sexual identity; to examine the relationship between LGB+ sexual identity development and psychological well-being; and to explore the factors that affect this relationship.

The conceptualisation of sexual identity as a set of categories or a continuum is a debated topic, in media and research. The categorical approach is most commonly used, yet is limited by lack of consensus on the best method of assessment (Dillon, Worthington & Moradi, 2011). There are three main methods within this approach: gender of attractions (i.e. same sex, opposite sex, or both sexes); gender of sexual behaviours; and self-reported identity (traditionally, gay/lesbian, heterosexual or bisexual) (e.g. Borders, Guillen & Meyer, 2014; Fergusson, Horwood & Beauvais, 1999; Needham, 2012). This approach assumes people will be congruent in their attractions, behaviours and identity. For example, individuals who experience only same sex attractions would have only same sex

behaviours and would identify as gay/lesbian. Although this is true for some people, for others these components are not consistent (Serwatka, 2010). Categorical approaches are also criticised for their rigidity, as sexuality involves diverse attractions, behaviours or fantasies (Fassinger & Arseneanu, 2007; Vrangalova & Savin-Williams, 2012). Additionally, this approach does not account for inconsistencies present between reported sexual attraction and sexual identity. Due to categorical restrictions and limitations a plethora of colloquial identity labels currently exist in attempt to describe the spectrum of sexuality, such as gay and asexual (Galupo, Mitchell, Gryniewicz & Davis, 2014). Past literature, therefore, has attempted to fit the diverse spectrum into neat categorical boxes. Researchers of human sexuality have demonstrated the complexity and diversity of sexual identity as a scientific construct.

Kinsey, Martin and Pomeroy (1948) argued for the complexity of human sexuality, stating “males do *not* represent two discrete populations; heterosexual and homosexual. The world is not to be divided into sheep and goats... Only the human mind invents categories and tries to force facts into separated pigeonholes. The living world is a continuum in each and every one of its aspects.” (p. 639). The continuum approach embraces the infinite combinations of potential attractions, fantasies, behaviours and self-reported identities, and is supported by the literature (e.g. Bejakovich, 2013). In order to align with continua research, Vrangalova and Savin-Williams (2012) provided participants with greater options in self-reported identity, finding the additions useful to their sample. Epstein et al. (2012) devised a method for assessing sexual identity on a continuum, incorporating 18 items investigating one’s attractions, behaviours and fantasies for opposite and same sex individuals. This measure does not assume the attraction or sexual experience toward one gender subtracts from that of another gender. That is, if a man was attracted to other men this measure does not assume his attraction to women is lower than a man who is attracted to women; thus, attraction for men and women is unrelated to each other. This feature has been present in past measures of the sexual identity continuum. The psychometric properties of Epstein et al.’s measure were evaluated by the original article, finding support of the measure’s reliability and predictive validity. Additionally, the study conducted a factor analysis supporting the distinction between the same and opposite sex scales. Similarly, the scale designed by Epstein and colleagues has been supported by Bejakovich (2013) and Epstein and Robertson (2014). Sexuality is not simply a dichotomy (or trichotomy) as the traditional categories (i.e. gay, bisexual and heterosexual) imply,

rather it is a spectrum of experiences. Future research should embrace this diversity and challenge the di- or tri-chotomous presumption by including continuum based assessments, such as the measure developed by Epstein et al., and incorporation of colloquial identities.

LGB+ sexual identities have been associated with higher rates of negative psychological outcomes (e.g. Birkett, Espelage & Koenig, 2009; Espelage, Aragon & Birkett, 2008; Haas et al., 2010; Lucassen et al., 2011). For example, Jager and Davis-Kean (2011) investigated the relationship between self-reported identity, sexual minority status (referring to the presence of same sex attraction) and psychological well-being. They found the presence of same sex attraction, independent from identity, was negatively associated with well-being. This study suggested further research should explore the experiences of self-identified heterosexual individuals with same sex attractions. Exploration of how sexual identity and same sex attraction affects well-being is needed in future research.

Psychological well-being is defined as the presence of positive affect and life satisfaction and absence of negative affect, or the ability to live as one's true self. It is affected by one's proclaimed sexual identity or their placement on the continuum, ranging from exclusive heterosexual inclinations to exclusive gay/lesbian inclinations. Development of this identity is another important factor in fostering well-being. Identity development is a rite of passage for all individuals. It involves the establishment of a stable, coherent sense of self. When this process diverges from societal norms and expectations it results in a conscious exploration of internal experiences, developing their beliefs, values and roles despite the influence of dominant society (Glover, Galliher & Lamere, 2009; Tomlinson & Fassinger, 2003). According to Hammack (2005), sexual identity development begins with a biological predisposition creating sexual desire. This is then interpreted subjectively, being greatly influenced by internalised beliefs and values. Previously developed beliefs and values are influenced by an individual's culture and environment, including influences of dominant culture. Interpretation and exploration of sexual, emotional and romantic desire results in sexual behaviours, and/or decisions to be made regarding one's sexual identity. Psychological models, such as Troiden (1988, 1989) and D'Augelli (1994), have been developed to describe the interpretation of one's experience into a stable sexual identity. Few of these models have been empirically tested. Exploration of the connection between well-being and development is necessary to further understand how same sex experiences may be associated with lower levels of well-being.

Sexual identity development has demonstrated a positive relationship with most measures of psychological well-being. That is, as one progresses through development, creating a more stable and coherent identity, one's psychological well-being also tends to increase (Konik & Stewart, 2004; Rosario, Schrimshaw & Hunter, 2006). This relationship, however, is not consistent within the literature. For example, one study found self-esteem to increase with sexual identity development, whereas another study - using the same measure - did not find a significant relationship (Feldmen & Wright, 2013; Rowen & Malcolm, 2003). These studies only compare individuals questioning their identity to those who have an integrated identity. This excludes those said to be in the intermediate phases of development. For example, individuals who are aware of, and learning how to accept their identity, were not compared to those who are questioning, or have integrated their sexual identity. Including these intermediate individuals into analysis complicates this seemingly linear trend. Halpin and Allen (2004) found a U-shaped relationship between sexual identity development and psychological well-being. Individuals early and late in development demonstrated similar levels of psychological well-being (referring to participant levels of happiness, life satisfaction, self-esteem, and loneliness). Participants in the middle of their identity development, however, demonstrated significantly lower levels of well-being. Other authors have demonstrated only an integrated identity has a positive relationship with well-being, suggesting all development prior to this (e.g. questioning, exploration of identity) was associated with lower levels of psychological well-being (Kappler, Hancock & Plante, 2013; Swann & Spivey, 2004). Research has also found a relationship between progressing through sexual identity development and integrating one's sexual identity to their global identity, which is associated with enhanced psychological well-being. Further research is necessary to examine how well-being is affected by the understudied middle part of development, as well as how it compares to earlier and later parts of development.

Development, and its relationship with psychological well-being, is influenced by many factors. One factor is the presumption of heterosexuality present in society, which creates a daily consideration of disclosing one's identity. That is, others assume an individual has a heterosexual identity, and so LGB+ individuals must decide whether to disclose their identity in daily interactions (Rust, 2003). This presumption limits knowledge about LGB+ experiences. Similarly, other forms of heterosexism are present in current society, such as perpetuation of stereotypes regarding people identifying as LGB+.

These messages may be internalised or create worries about acceptance. An individual may be motivated to hide their sexual identity due to these concerns. These worries, beliefs and concealment motivation can affect the individual's LGB+ identity development and their psychological well-being. These concerns also may be present in varying degrees throughout different parts of development. Halpin and Allen (2004) suggest early questioning of one's sexual identity results in exploration of the LGB+ community, and may make these individuals more vulnerable to negative societal messages about this community. That is, internalised heterosexism (i.e. internalised negative beliefs surrounding LGB+ identities) is common earlier in development and has a negative impact on psychological outcomes (Mohr & Fassinger, 2000; Wright & Perry, 2006). In summary, to better understand how sexual identity development is associated with psychological well-being, and the inconsistencies in the relationship, it is important to investigate factors related to development, such as heterosexism, disclosure and factors associated with a positive identity (as described by Mohr and Kendra, 2011).

Limitations of Past Research

The limitations of the literature fit under three main themes: sexual identity assessment and conceptualisation; relationship between sexual identity development and psychological well-being; and factors related to this relationship. The first limitation is the problem in defining and measuring sexual identity. There has been a difficulty in conceptualising the diversity of sexual identity, and so a debate exists in which is the best method of understanding sexual identity: categorical, continua or a combination of both conceptualisations (e.g. incorporating more categorical identities to better capture the continuum of sexual identity). The second limitation is that studies tend to present data on the difference between people in earlier and later parts of development, when comparing their reported levels of psychological well-being. This neglects the unique experiences of those in the middle phases, whom may be most vulnerable. The third limitation is few studies investigate factors, which may influence this relationship, such as heterosexism. Investigating these factors could help highlight the reason individuals in the middle part of development may be vulnerable. These three limitations of the literature inspired the main aims of this doctoral dissertation.

Summary of the Current Research

The scope of this dissertation is limited to sexual identity and considers the presumption of a heterosexual identity, identity disclosure and factors associated with a positive sexual identity (including variables described by Mohr and Kendra, 2011). The main aims of this research include:

- To utilise an approach of assessing sexual identity that goes beyond the tradition tri-chotomous categorical approach (i.e. heterosexual, gay and bisexual);
- The investigation into the relationship between sexual identity and its specific phases of sexual identity development and psychological well-being;
- The exploration of how specific factors related to identity development (e.g. identity certainty and disclosure) influences this relationship.

This research involves the use of an online survey in order to assess these aims, incorporating a number of measures assessing the following: sexual identity and its development, presumption of a heterosexual identity, the degree of disclosure, sexual identity-related variables described by Mohr and Kendra (2011), and psychological well-being variables. These factors were investigated in order to help dissect the relationship between psychological well-being and sexual identity development.

Thesis Outline

The following chapter will present the literature review, beginning by introducing identity and psychological well-being, and examining categorical and continuum conceptualisations of sexual identity. From here, there will be an exploration of various theories on the sexual identity development, focusing on a model originally developed by McCarn and Fassinger (1996). This chapter will then discuss the relationship between sexual identity development and psychological well-being concluding with a set of research hypotheses. Chapter 3 presents the methodology of this research, describing the online survey in depth. This is followed by the results chapter, which articulates the analyses and findings of the survey. Finally, chapter 5 concludes the dissertation with a discussion of the research findings and the future directions for research in this field. This research strives to better understand the relationship between sexual identity, its development and psychological well-being. From this, it endeavours to supply both educational and clinical settings with knowledge on the experience of sexual minorities,

with the hope that these settings can instil action. As Nathaniel Brandon (as cited in Haraburda, 2010) stated “The first step toward change is awareness” (p. 16).

Chapter 2: Literature Review

Back to Basics: Defining Psychological Well-Being and Identity

“I feel so good!”: Defining Psychological Well-Being

Psychological well-being is a multi-dimensional construct, with no one definition. According to Dodge, Daly, Huyton and Sanders (2012), there have been ongoing difficulties in defining psychological well-being, rather than simply describing it. Well-being was a way to move away from the deficit focus of psychiatric literature and mental health (Dodge et al., 2012). In general, it has been defined from either a hedonic or a eudaimonic perspective. The hedonic perspective defines well-being as the pursuit and presence of happiness and pleasure. It suggests well-being is the sum of positive and negative affect and life satisfaction (Diener, Suh, Lucas & Smith, 1999). In contrast, the eudaimonic perspective asserts psychological well-being is an individual's ability and capability to live to their true potential and true self. That is, an individual must live in line with their values and beliefs, fulfilling their true potential to be psychologically well. This perspective endorses dimensions, such as self-acceptance and environmental mastery, which have been found to be positively correlated to self-esteem (Ryan & Deci, 2001; Ryff, 1989, 1995).

Studies operationally define psychological well-being using different variables, or as a combination of variables, and so well-being can be thought of as an umbrella term for a number of variables. Some define it as the level of happiness their participants report (e.g. Halpin & Allen, 2004), and others may define it as the degree of satisfaction their participants have with their life (e.g. Bejakovich, 2013). There are numerous other variables used to operationalise well-being; these include, but are not limited to: positive affect, self-esteem, negative affect, and loneliness (Bejakovich, 2013; Halpin & Allen, 2004; Swann & Spivey, 2004). High psychological well-being is characterised as higher degrees of pleasant emotions (e.g. happiness) and lower levels of unpleasant emotions (e.g. sadness). It is important to note, “to be psychologically well is more than to be free of distress or other mental problems” (Ryff, 1995, p. 103). That is, someone with no mental health difficulties does not automatically have high levels of psychological well-being, nor

is someone with low levels of psychological well-being automatically concluded to have poor mental health.

Therefore, the literature has a broad understanding of psychological well-being. For this reason, when discussing the literature surrounding well-being, this thesis has referred to the specific variables used to operationalise psychological well-being in the reviewed studies. This research itself has incorporated both hedonic and eudaimonic perspectives in defining psychological well-being. This study also chose to utilise variables measured in previous studies in order to make the results more comparable to past research. This research utilised the following measures: positive and negative affect (hedonic well-being), life satisfaction (can be thought of as both eudaimonic and hedonic well-being), self-esteem (correlated to eudaimonic well-being variables in past research), and anger (hedonic well-being). No mental health variables (e.g. depression, anxiety) were explored in this study because the research maintained a positive psychology focus. These variables have been used to describe the relationships between sexual identity, LGBQ+ identity development, and psychological well-being.

“Who am I?”: Defining Identity

Media and researchers have trouble defining identity, generally taking it for granted until there is an absence of it, such as when people undergo an identity crisis (Lawler, 2014). Hall and Gay (1997) refer to identity as a dynamic and fluid construct, developed throughout the lifespan as experience and behaviour meet to increase internal congruence. They also state it is the recognition of shared attributes with others. This suggests identity is better explained as the intersection of many singular identities. For instance, a woman may view her identity as the combination of her identity as an employee, as a woman, as a daughter and as an academic, among other combinations. Hewitt (2007) describes personal and social identities separately. Hewitt defines personal identity as the combination of personal attributes and traits. Social identities, on the other hand, are defined as the place a person has in their community, as well as the process of self-categorisation and comparison to groups in society. Interconnectedness between these individual concepts exists because attributes that constitute the personal and social identities may be similar. For example, the pigment of one’s skin can be seen as a part of one’s personal identity; however, when in context of other people with similar pigmentation, it could be considered a social identity (Vignoles, Schwartz, & Luyckx, 2011). Although these levels of identity refer to different

aspects of the individual, they are connected and evolve together. Therefore, both are important to the development of a stable, positive sense of self.

Formation of an identity is dynamic, involving an individual assessing and exploring their goals, values, beliefs and roles, and committing to an integrated set of these elements. Identity development is essential in human development, affecting the individual's psychological well-being (Dillon et al., 2011; Hewitt, 2007). It reduces internal conflict by unifying behaviours, thoughts and emotions, and by increasing a positive and coherent sense of self. This can act as a buffer against external stressors, such as stigma, and is negatively associated with internal stressors, such as internalised negative attitudes (Rosario, Schrimshaw, Hunter & Braun, 2006; Happner & Kernis, 2011; Kiang, Yip, Gonzales-Backen, Witkow & Fuligni, 2006). Identity formation motivates social attachment, resulting in the creation of social networks, which can act as a coping resource for managing internal and external stressors (Balsam & Mohr, 2007; Haslam, Jetten, Postmes & Haslam, 2009). The beneficial effects of a positive, stable identity have been documented in ethnic and sexual identity studies (e.g. Wakefield & Hudley, 2007; Kiang et al..., 2006; Malley & McCann, 2002; Saewyc, 2011). This research focuses the investigation on the association between sexual identity, and its development, and psychological well-being.

Sexual Identity: Definitions and Disparities

“Gay? Straight? Bi? Identity or Orientation?”: A Problem in Definition

Social constructionists are those who subscribe to an epistemology proposing the meaning of objects or traits is socially constructed and so are imbedded in history, social contexts and culture (Darlaston-Jones, 2007; Denne, 2010; Gergen, 1985; Greenwood, 1992; Mallon, 2007). They believe sexual and gender identities are created and defined by culture, and Western society created sexual identity labels to describe same sex behaviours (Fassinger & Arseneau, 2007). Prior to this people did, or did not, take part in same sex behaviours; in some societies this was punished, while in other societies it was accepted (Serwatka, 2010; Adam & Phillips, 2009). Labels framing same sex coupling and fantasies as an abnormality arose in 1868-69 (Sell, 1997). Prior to this, religious discourses referred to such behaviours as an abomination or to the individuals as sodomites (Levy, 2009). The term heterosexual did not develop until 1892 - originally created to describe a disorder of hyper-sexuality - but over time, it was used to describe normative sexual practice. Later,

homosexuality implied disorder, appearing in the first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM). It was finally removed in 1973 (Eliason, 2009; Moe, Reicherzer & Dupuy, 2009). For the majority of its history, homosexuality was considered a disorder and an abnormality. Due to this perception, the American Psychological Association (1991) have recommended using terms such as gay and lesbian in its place. The term bisexual was introduced in the late 1940s, but has received very little acknowledgement by research until the 1980s. People with bisexual identities still have to ‘fight’ to establish bisexuality as a valid sexual identity due to biphobia (i.e. the discrimination of people identifying as bisexual) (Dillon et al., 2011; Firestein, 2007). Over time, the number of terms used to describe sexual identity has increased, varying greatly by various factors such as age, gender, educational background, ethnicity, and geographical location (Eliason, 2009). As these labels are embedded in culture and history, their use changes over time and varies by societal beliefs. For example, in the past sexual identity was defined by the masculinity of the male, and so the gender of the partner was not important. Rather societal acceptance was given based on a man’s masculinity (Wilkenson, 2007). That is, if the man met masculine characteristics, he was accepted by society whether or not his partner was a man or a woman. The reliance on societal beliefs has not helped to define sexual identity/orientation, demonstrating the difficulty in conceptualising and defining sexuality.

Although defining sexuality has been difficult, it is important to understand the distinction between sexual orientation and sexual identity. Becker, Cortina, Tsai and Eccles (2014) defined sexual orientation and identity as synonyms, defining them as “sexual attraction, emotions, fantasies, behaviour, or self-labelling, or a combination of these” (p. 133). Sexual orientation, however, is described as having a biological basis, enacted through environmental influences. This has suggested internal experiences – sexual, emotional and romantic attraction, thoughts and fantasies – toward others are universal. In contrast, sexual identity refers to the conscious recognition and internalisation of consistent and enduring meanings of a person’s sexual behaviour and orientation. It is dependent on the social context, gender identity, cultural influence and attachment style. These are not universal or resistant to change; rather they can shift with each new experience and context (Dillon et al., 2011; Risco, 2008; Savin-Williams, 1990). For example, an individual may have a gay orientation (i.e. fantasies about men and is attracted to men) and behave bisexualy, but self-identify as heterosexual due to external factors, such as social status. In

summary, there is a clear distinction between sexual orientation and sexual identity. Sexual orientation refers to an innate predisposition, resulting in an attraction for either same or opposite gender, all gender identities or no specific gender that is unaffected by society. Sexual identity, on the other hand, is the descriptor of one's sexual orientation chosen by the individual, which can vary by social factors.

In layperson's terms, an individual who is sexually and emotionally attracted to people of the opposite sex would be assigned a heterosexual identity. A person who is attracted to people of the same sex, emotionally and sexually, would be considered gay or a lesbian. Someone attracted to both men and women is considered bisexual. However, these categories are often too restrictive for the diverse experiences people have (American Psychological Association, 2010; Serwatka, 2010). To alleviate this, other identification categories were created, including, but not limited to: asexual, referring to the absence of sexual attraction; queer refers to an umbrella term for those who are not heterosexual or cis-gendered (i.e. gender identity matches biological sex); and pansexual, defined as sexual and emotional attraction to all gender identities, including trans-gendered individuals (Callis, 2014; King, 2011; Savin-Williams, 2001; The Asexual Network, 2012). More labels exist, such as demi-sexual, yet some individuals refuse to label themselves altogether (Pallissier & Dal Santo, 2012; Savin-Williams, 2001). The plethora of sexual identity labels compounds the difficulty in defining sexual experiences and identity.

This difficulty continues to the research setting, as there is debate on the best method of assessing lesbian, gay, bisexual and other identities. There are currently three prevalent methods of assessment, including: sexual behaviour (e.g. Fergusson, Horwood & Beautrais, 1999; Wells, McGee & Beautrais, 2011); physical attraction (e.g. Needham, 2012; Halpin & Allen, 2004; Rieger, & Savin-Williams, 2012); and self-identification (e.g. Borders, Guillen & Meyer, 2014; D'Augelli & Grossman, 2001; Jamil, Harper & Fernandez, 2009; Risco, 2008). Past research, however, suggests these components do not always align, and so make it difficult to compare studies (Savin-Williams, 2006). For example, in Bostwick, Boyd, Hughes and McCabe's (2010) sample, 504 participants reported attraction to people of the same sex only, and 519 stated they had had sex with only members of the same sex, yet only 335 participants identified as 'lesbian or gay'. Using the traditional categories alone seems to perpetuate this misalignment between methods of assessment because of their rigid definitions, and questions the existence of other identities, such as asexuality (American Psychological Association, 2010; Callis,

2014; Friedman, Gold, Markovic, Savin-Williams, Huggins & Sell, 2004). Extending options in self-reported identity has provided a better conceptualisation of sexual identity, and has demonstrated greater respect for diversity. One study found support for a five category classification of self-identification, incorporating ‘mostly straight’ and ‘mostly gay/lesbian’ as sexual identities (Vrangalova & Savin-Williams, 2012). Other studies have also incorporated more categories in their attempt to better demonstrate the diversity within sexual identity (e.g. Bejakovich, 2013; Birkett, Espelage & Koenig, 2009; Espelage, Aragon & Birkett, 2008; Jamil et al..., 2009; Katz-Wise, 2014). Providing more options in identification attempts to embrace diversity, yet it is likely over-reliance on categories leaves room for incongruence between the three components of sexual identity. That is, there may be individuals who, even with greater options, may not fit into the rigidly defined categories and so their experiences do not align with their chosen identity.

To truly embrace diversity, sexual identity can be viewed as a descriptor for a spectrum of attractions, fantasies and behaviour (i.e. aspects of sexual orientation), rather than a dichotomy or tri-chotomy (Moe et al., 2009). Kinsey et al. (1948) were the first to describe the diversity of sexuality and bisexual experience, creating the Kinsey scale, a 7 point scale, ranging from 0 ‘exclusively straight’ to 6 ‘exclusively gay/lesbian’. This scale empowered participants by eliminating the need to ‘fit’ into a category (Drucker, 2012). Inspired by this, the Klein Sexual Orientation Grid was created, assessing sexual orientation based on past, present and future ratings of physical attraction, behaviour, fantasies, emotional preferences, social preferences, self-identification, and gay/heterosexual lifestyle (Coleman, 1987). These scales, however, suggest as attraction for one gender increases, the attraction for the other diminishes, presenting a singular continuum, see Figure 1a. A singular continuum hypothesises people with bisexual identities would be expected to be more attracted to the same sex when compared heterosexual individuals, but less attracted than gay individuals (Moe et al., 2009). Shively and De Cecco (1977) developed an alternative proposition, suggesting sexual identity was better conceptualised on two separate continua: one for opposite sex attractions/behaviours/affect, and one for same sex attractions/behaviours/affect (see Figure 1b). Storms (1980) found support for this two dimensional model of sexual identity as bisexual-identified participants were comparable to those with heterosexual and gay identities in terms of opposite sex and same sex attraction, respectively. A benefit of understanding sexual identity in this manner is the implied increase of potential diversity

within sexuality. That is, the single continuum reported by Kinsey suggests there are only six potential identities, ranging from exclusively heterosexual to exclusively gay/lesbian. The two continua model, however, includes a range of identities from individuals who are not attracted to either sex (i.e. asexuality), to those extremely attracted to both sexes (i.e. bisexuality). This diversity can help eradicate the current stigma faced by individuals who do not identify in the traditional categories, as well as those who do not fully ‘fit’ the categorical prototypes (Drucker, 2012). A continuum could alleviate stigma as it demonstrates that most individuals experience some level of same sex attraction despite what is implied by the common identification of heterosexuality.

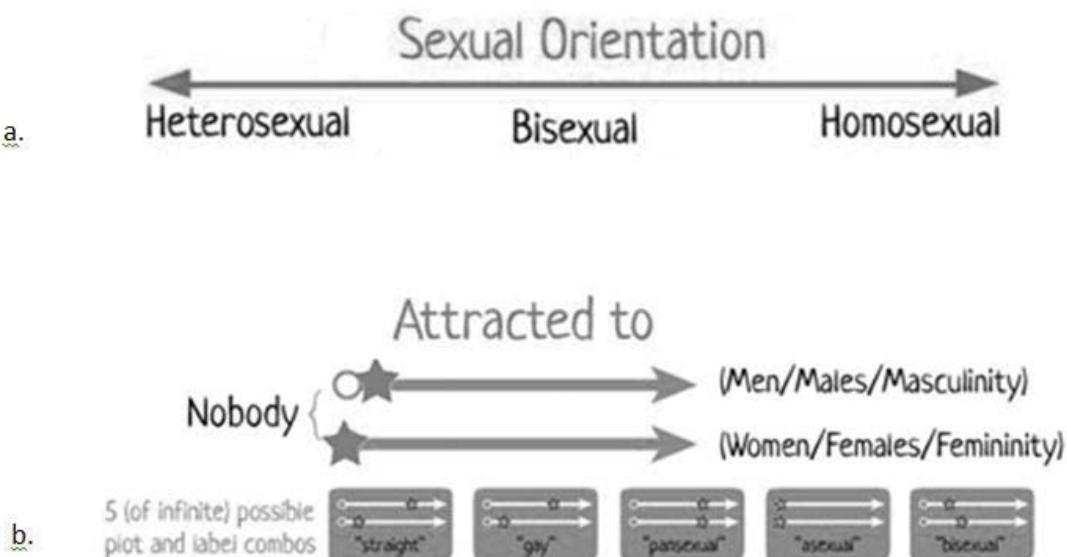


Figure 1. Pictorial representation of the singular continuum and two continua descriptions of sexual identity, credited to Killermann (2015).

Research supports the notion of sexual identity continua, and the societal benefits of taking up this notion can be seen, which makes it an ideal theory to inspire a measure of sexual identity (Epstein, McKinney, Fox & Garica, 2012; Vrangalova & Savin-Williams, 2012). Epstein et al. (2012) provided evidence for the two continua conceptualisation, as well as creating a measure of sexual identity scale based on its premise that attraction for the opposite sex does not affect attraction of the same sex. This study consisted of an online survey reaching over 17 thousand individuals, and developed a measure called the Epstein Sexual Orientation Inventory (ESOI). This inventory places individuals on a continuum between 0 and 13, assigning participants a mean score and a sexual orientation

range based on 18 items. This study produced a novel manner in which to assess sexual identity, through an instrument, which measures fantasies, behaviours and attractions for the same and opposite sex on separate scales.

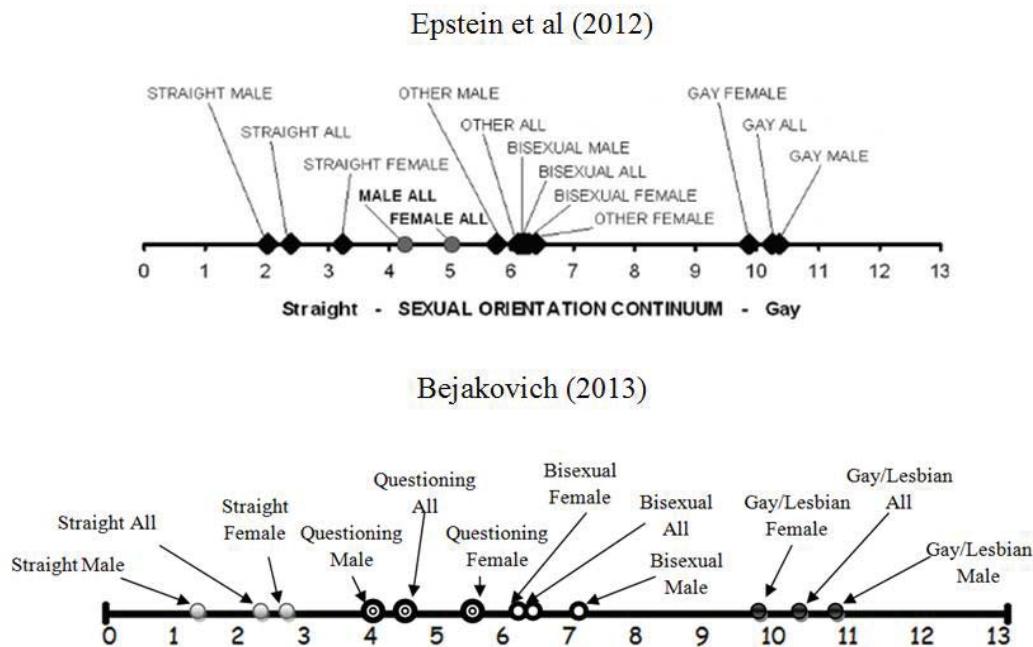


Figure 2. Sexual identity continua presented in Epstein et al. (2012) and Bejakovich (2013).

Note: This figure was retrieved from Journal of Homosexuality. Copyrighted 2012 by Taylor & Francis Group.

The internal consistency of the ESOI was validated by Bejakovich (2013). Furthermore, Bejakovich was able to demonstrate similar placements of the sexual identity categories along the spectrum as the original studies. The overall pattern was also maintained across these studies as can be seen in Figure 2. Male participants in both studies were closer to the expected positions. Based on their common definitions (e.g. heterosexual participants are hypothesised to score a 0 on the continua). Additionally, the study also reported acceptable internal consistency for the overall ESOI scale ($\alpha = 0.71$) and good internal consistency for the fantasies, attractions and behaviours subscales ($\alpha = 0.86 - 0.93$) (Bejakovich, 2013). The scale remains online and has reached over 54 thousand people, providing support for the sexual orientation continuum and the scale itself (Epstein & Robertson, 2014). The ESOI was incorporated into the online survey in the current research.

“Is it Greener on the Other Side of the Fence?”: Disparities between Sexual Identities

Individuals with LGB+ identities tend to have higher rates of mental health disorders and lower levels of psychological well-being (Meyer, 2003). One study found their LGB participants were almost twice as likely to meet criteria for Major Depressive Disorder (Fergusson et al., 1999). Much other research supports the higher reported rates of mental health among LGB+ identities (e.g. Bostwick et al., 2010; Haas et al., 2010; Volpp, 2010). Jorm, Korten, Rogers, Jacomb and Christensen (2002) sampled electoral rolls and found a disparity between participants identifying as gay/lesbian and bisexual, where bisexually-identified participants had higher levels of depressive and anxiety symptoms. As other identities surface in the literature, the disparities between these and heterosexual identities are found as well. For example, Espelage et al. (2008) and Birkett et al. (2009) incorporated questioning participants in their analysis. In these studies, those identifying they were confused about their sexual identity were placed in this questioning group. These studies found this group had significantly higher levels of psychological distress. Birkett et al. found the questioning group reported more suicidality, depression, drug use and truancy even after controlling for school climate and homophobic teasing. There has been a slower transition to exploring psychological well-being (i.e. satisfaction and happiness). According to Ryff (1995), the absence of mental health and distress is not sufficient for the presence of psychological well-being. It is, therefore, important to investigate the psychological well-being of people with various identities in order to gain a fuller awareness and understanding of their experiences.

The literature on psychological well-being outcomes typically supports mental health research, demonstrating some people with LGB+ identities may have lower levels of psychological well-being (Becker et al., 2014; Bejakovich, 2013; Rieger & Savin-Williams, 2012). For example, Becker et al. (2014) collected data from a longitudinal study, demonstrating overall levels of depressive affect were higher for participants who did not identify as heterosexual. Heterosexually-identified participants are typically used as a reference point due to the plethora of literature finding people with LGB+ identities report more mental illness (and less psychological well-being) than those with heterosexual identities. Consistent with Becker et al., Bejakovich (2013) found lesbian, gay, bisexual and questioning (LGBQ) participants reported lower levels of general happiness and average affect, when compared to heterosexual peers. The literature, however, is not always consistent. Some research does not find disparities between heterosexual and LGB+

identities on specific variables of psychological well-being (e.g. Diamond & Lucas, 2004; Kappler, Hancock & Plante, 2013; Shepler, 2012; Stout, 2000; Yean, Benau, Dakanalis, Hormes, Perone & Timko, 2013). For instance, consistent with mental health literature, Jorm et al. (2002) found heterosexually identified participants reported lower levels of negative affect when compared to people with LGB+ identities. They also found no significant difference between the identities in respect to their reported level of positive affect.

It is possible gender may have an effect on the differences in well-being between people with different sexual identities. Stout (2000) found participants with a lesbian/gay identity had lower levels of self-esteem than those who identified as heterosexual, yet post hoc analysis only found only gay men were significantly different to heterosexual participants. In contrast, Yean et al. (2013) reported lower levels of self-esteem for gay/bisexual men and lesbian/bisexual women, yet hypothesis testing only revealed lesbian/bisexual women had significantly lower self-esteem than heterosexual women.

It is also possible other factors have an impact on this relationship. Jager and Davis-Kean (2011) investigated how the presence of same sex attraction, irrespective of the identified sexual identity, influences psychological well-being outcomes. These authors labelled individuals who reported any attraction toward the same sex as having a sexual minority status. They then compared participants with various sexual identities by their psychological well-being. Those with the sexual minority status (i.e. any reported level of same sex attraction) were associated with lower levels of psychological well-being when compared to their heterosexual-identified/non sexual minority status peers, regardless of their sexual identity; that is, those who had a self-reported heterosexual identity, but also reported same sex attractions endorsed lower levels of well-being than heterosexually-identified participants with no same sex attraction. These inconsistencies demonstrate the need for future research to continue assessing psychological well-being disparities between heterosexual and lesbian, gay, bisexual, questioning and other (LGBQ+) identities, as well as the need for research to take into account other factors.

A number of theories have been used to explain the disparities in psychological well-being between different self-reported sexual identities. A common explanation involves some reference to minority stress theory (see Figure 3). This theory proposes the minority status of a LGBQ+ sexual identity has its' own constellation of internal and

external stressors, seen in Figure 3A and 3B (Keheller, 2009; Meyer, 2003). External stressors are thought of as objective stressors, as they can be present whether the person identifies with the minority status, including discrimination, prejudice and stigma. This can occur to people with any sexual identity, including heterosexually identified people – seen in figure 3i (Espelage et al., 2008; Shilo & Savaya, 2011). For example, Espelage et al. (2008) investigated the effects of homophobic teasing on students in high school, revealing homophobic teasing negatively affects heterosexual students, as well as those who identify as LGB or questioning. Internal stressors refer to the subjective stressors specific to the minority status. This theory focuses on two internal stressors: internalised homonegativity (i.e. the internalised negative attitudes, stereotypes and/or beliefs surrounding LGB+ identities) and stigma consciousness (i.e. the expectation of being stereotyped and/or stigmatised due to one's minority status), refer to Figure 3ii and 3iii (Meyer, 2003; Shilo & Savaya, 2011). In summary, the combination of internal and external stressors experienced by an individual may be associated with the degree of negative psychological outcomes.

Bisexual participants are expected to be more vulnerable to negative psychological outcomes due to experiences of biphobia and double discrimination. The mental health literature generally supports this hypothesis (Meyer, 2003). Jorm et al. (2002) found bisexual participants reported higher levels of negative affect when compared to gay/lesbian participants. There is, however, other mental health research that does not support this prediction. Mustanski et al. (2010) only found partial support for the minority stress theory. The study found a difference between heterosexual and LGB participants, yet the bisexual participants were not significantly different to those identifying as gay/lesbian or had lower odds of meeting criteria for DSM diagnoses. This study therefore contradicted predictions made by the minority stress theory. Psychological well-being literature has, also, only demonstrated partial support for the theory. Most studies have shown differences between heterosexual and LGBQ+ participants in terms of psychological well-being variables, yet less commonly a difference between the LGBQ+ identities has been found (e.g. Bejakovich, 2013; Kertzner et al., 2009). Kertzner et al. (2009) found bisexual participants did not have lower psychological well-being when compared to participants identifying as lesbian and gay. Some studies have even shown no support for the minority stress theory. Selvidge, Matthews and Bridges (2008) explored the connection between heterosexist and sexist events (e.g. being treated unfairly by friends or family due to a LGBQ+ identity or due to being a woman,

experiencing homophobic teasing) and psychological well-being, concluding there was no direct connection between minority stressors and psychological functioning. Although the minority stress theory is a useful framework to understand the experience of minority groups, research has demonstrated some weaknesses in the model. Therefore, some adaption may make the theory more robust, providing better explanations for research findings.

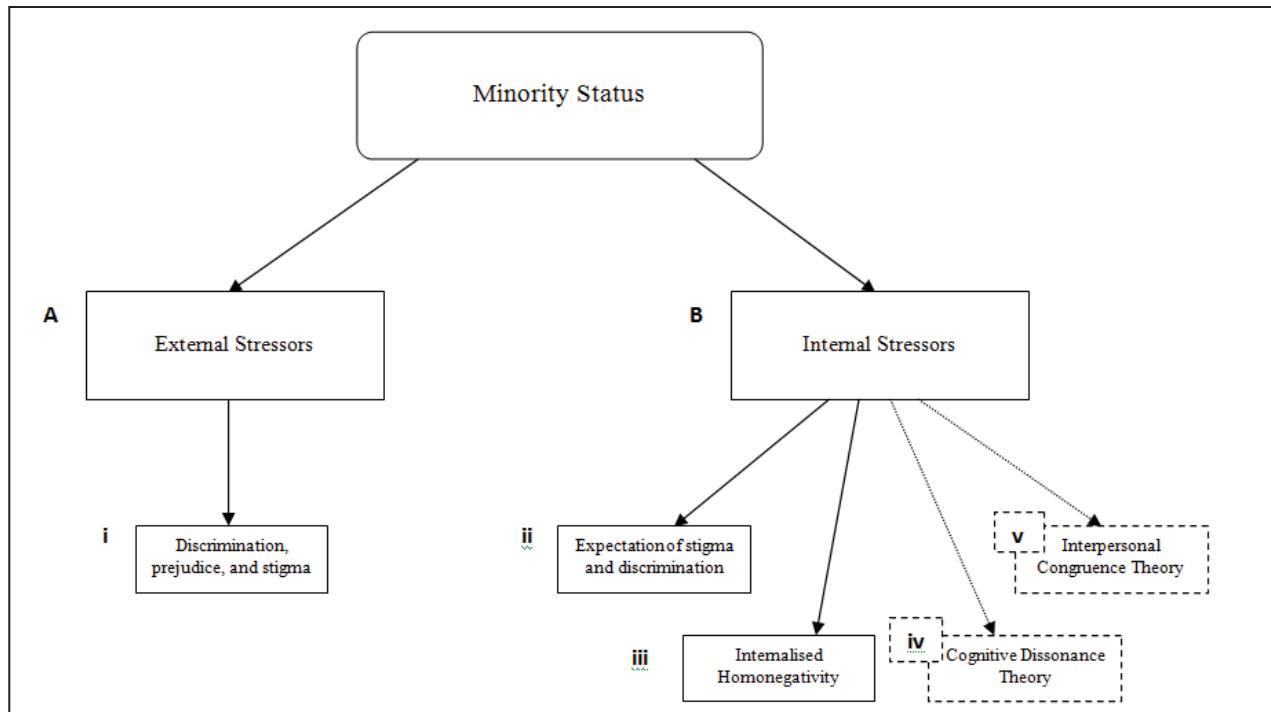


Figure 3. A depiction of minority stress theory as described by Meyer (2003), and potential external and internal stressors, as well as two stressors not included by Meyer (2003).

Minority stress theory should consider other theories within the framework to gain a more informative picture surrounding the disparities between sexual identities. Cognitive dissonance theory proposes cognitive inconsistencies create psychological discomfort, which acts as a motivator to reduce this dissonance (Festinger, 1957). Cognitive dissonance can occur when individuals experience identity confusion, resulting from an inconsistency between experiences, such as attractions and fantasies, and perceived identity. Identity confusion and uncertainty negatively affect psychological outcomes, suggesting cognitive dissonance theory may help explain disparities between identities (Bejakovich, 2013; Cox, Vanden Berghe, Dewaele, & Vincke, 2010; Wright & Perry, 2006). Schick, Rosenberger, Herbenick, Calabrese and Reece (2012) investigated participants who participated in sexual behaviours, which were not representative of their

sexual identity, and how this influenced health outcomes. This study demonstrated incongruent identification was related to worse health outcomes when compared to congruent identification.

Another related theory to consider is interpersonal congruence theory. This theory proposes individuals aim to reach congruence between one's private and public identity. This congruence translates in stability in behaviour. This theory is also a key component in some sexual identity development theories (Backman, 1985; Cass, 1979). Incongruence between public and private identities creates dissonance and so acts as a motivator to align these identities. Aligning the two views is completed by disclosing one's sexual identity, reducing the inconsistency in their environment (Polzer, Milton & Swann, 2002). Supporting this, studies have demonstrated disclosing one's sexual identity has been often associated with positive psychological outcomes. Inconsistencies in research can be explained by the reactions received upon disclosure, such as negative emotions following an abusive reaction (Bejakovich, 2013; Robertson, 2011; Smith, 2011; Wright & Perry, 2006). These theories do not contradict minority stress theory, rather they compliment it. Cognitive dissonance theory and interpersonal congruence theory can be placed under potential internal stressors under the theory, as can be seen in Figure 3iv and 3v.

In summary, there is an important distinction between sexual orientation (i.e. innate attraction to either or both genders) and sexual identity (i.e. a descriptor of one's sexuality). Categorical conceptualisations of sexual identity have attempted to respect diversity by extending options from the traditional three labels – heterosexual, bisexual and lesbian/gay. However, to truly represent diversity researchers suggest the utilisation of a continua approach or further extending from the traditional categories (i.e. gay, bisexual and heterosexual). Epstein et al. (2012) developed a continuum measure of sexual orientation, which considers opposite and same sex behaviours, fantasies and attractions as mutually exclusive, placing the individual on a 14-point continua. Combining categorical labels with a measure such as this will ensure a fuller picture of the relationship between sexual identity and psychological well-being. Finally, LGBQ+ identities have been shown to have lower levels of psychological well-being when compared to individuals identifying as heterosexual. This has been explained in the past using the minority stress theory. However, some research suggests this theory may need to consider other factors to better explain the experiences of people with LGBQ+ identities. This doctoral research study has

suggested the incorporation of cognitive dissonance theory and interpersonal congruence theory.

Sexual Identity Development and Psychological Well-Being

“Presumed straight until demonstrated otherwise”: Heterosexism, heteronormativity and happiness

Within current Western society, there is a presumption individuals have a heterosexual identity from birth. Deviating from this ‘compulsory’ identity requires the individual to explore a new path. The person must go against societal norms and the presumed developmental pathway (Glover et al., 2009; Kitzinger, 2005). Heteronormativity refers to the practices that create and reinforce the presumption of one natural sexual identity (i.e. a heterosexual identity) and the dichotomous notion of gender identity (i.e. either man or woman). This perpetuates the ‘compulsory heterosexual identity’. Examples of heteronormativity includes predominately heterosexual couples in mainstream films and television shows, depictions of families with different-sex parents and LGB+ individuals as deviants of society, and the presentation of transgender individuals as abnormal or confused (Kitzinger, 2005). Heteronormativity is an umbrella term, which includes heterosexism. This is defined as the prejudice, discrimination and stigmatisation of same sex attractions, behaviours, relationships and identities. Heterosexism also refers to privileging individuals with a heterosexual identity, because they identify in the ‘natural’ and taken-for-granted sexual identity (Land & Kitzinger, 2005). Essentially, heterosexism consists of biases upholding the heteronormative presumption of heterosexuality and the gender dichotomy (Walls, 2008).

Heterosexism ranges from subtle verbal insults to obvious physical attacks against LGB+ individuals (Flowers & Bouston, 2001; Lands & Kitzinger, 2005). More recently, heterosexism is thought to have become less visible, shifting from hostility, such as hate crimes against LGBQ+ individuals, to more elusive forms, such as the presumption of a heterosexual identity, the maintenance of LGBQ+ stereotypes and comments such as “that’s so gay” (Flowers & Bouston, 2001; Land & Kitzinger, 2005; Rust, 2003; Swim, Pearson & Johnson, 2007; Szymanski, 2005; Walls, 2008). Subtle forms of heterosexism influence all individuals, even the nation’s leader. For example, John Key (former New Zealand Prime Minister) used the term ‘gay’ to mean ‘weird’ on a radio show. Later, he stated he did not realise this use of the term was derogatory (Donnell & Shuttleworth,

2012). Heterosexism reproduces presumptions, which privilege heterosexual individuals, while creating prejudice and stigma toward individuals with LGB+ identities.

The presumptions and privilege created by Western societies' standard of compulsory heterosexuality results in a sense of difference felt by individuals with same sex attractions (Ragins, 2008). Even in accepting societies, feelings of difference are experienced for those expressing same sex feelings and behaviours in the presence of this presumption (Flowers & Binston, 2001; Panchankis & Goldfried, 2013). Perpetuation of heterosexism has a negative impact of individuals with LGBQ+ identities as demonstrated by the association between acts of heterosexism, obvious or subtle, and lower levels of well-being in LGBQ+ people (Kitzinger, 2005; Szymanski & Henrichs-Beck, 2013; Szymanski & Sung, 2013; Singh et al., 2006; Weber-Gilmore, Rose & Rubenstein, 2011; Woodford, Howell, Silverschanz & Yu, 2012). This relationship is present whether or not an individual matches the heterosexist stereotypes; that is, people identifying as LGBQ+ are affected by heterosexist presumptions even when they do not epitomise LGBQ+ stereotypes. Mrs King-Miller wrote in *Cosmopolitan*, a popular women's magazine, about her life as a feminine, queer woman. She described her every day struggle with the 'heterosexual' presumption, forcing her to decide whether to 'come out' to acquaintances and strangers. She noted risking - at the very least - an 'awkward lull' in the conversation (King-Miller, 2014).

'Compulsory' heterosexuality is a daily heterosexist event people identifying as LGBQ+ face, which has a negative impact on their psychological outcomes. Research found as the frequency of this and other heterosexist events (e.g. LGBQ+ stereotypes, teasing and unfair treatment due to LGBQ+ identity) increases so does psychological distress (Ragins, 2008; Szymanski, 2005). When heterosexism is internalised it creates feelings of shame toward one's newly emerging identity. Some even feel compelled to hide their identity (Panchankis & Goldfried, 2013; Smith, 2011). Levels of internalised homonegativity vary by gender and sexual identity. That is, male and bisexual identified individuals report higher levels of internalised homonegativity when compared to female and lesbian/gay individuals (Costa, Pereira & Leal, 2013). Furthermore, levels of internalised homonegativity have been associated with psychological well-being. Szymanski and Chung (2001) reviewed the literature on internalised homophobia in women identifying as lesbian. They concluded internalised homophobia is related to higher levels of negative affect and depression. The societal movement towards more overt

acceptance has shown to be beneficial on LGB individual's well-being and levels of internalised homophobia. Riggle, Rostosky and Horne (2010) found LGB+ couples who were in legally recognised relationships reported lower levels of depression and internalised homophobia when compared to those in committed relationships. Heterosexism, however, is still very present, and whether internalised or external has a negative relationship with psychological well-being.

Rust (2003) suggests by maintaining the presumption of a heterosexual identity, heterosexism creates the necessity for LGBQ+ individuals to 'come out of the closet' (i.e. disclose their sexual identity). Ikizler and Szymanski (2014) agreed, stating heterosexist society inhibits LGBQ+ sexual identity development due to its' presumptions. That is, if heterosexism was eliminated there would be no need for LGBQ+ sexual identity models, as there would be no presumed heterosexual identity. Eliminating heterosexism would also remove the need to 'pass' as a heterosexual person, the self-hatred created by internalised heterosexism, and the need to disclose one's sexual orientation, among other sexual identity-related experiences (Flowers & Binston, 2001; Kitzinger, 2005; Land & Kitzinger, 2005; Rust, 2003). As this is not the case, people with same sex attractions must diverge from the presumed developmental pathway to undergo an exploration of a different pathway, sometimes lacking role models and the support from family and friends (Glover et al., 2009; Rust, 2003). Many aspects of heterosexism have been researched; however, the relationship between the presumption of heterosexuality and psychological well-being has not. Additionally, this presumption appears to be the initiator of sexual identity development as individuals who stray from compulsory heterosexuality must explore and interpret their sexual identity. However, the relationship between these constructs has not been explored. For these reasons, this study had decided to explore these relationships, in order to gain a better understanding of how presuming a heterosexual identity affects development and the well-being of those forming an identity.

"How did I get here?": A Path to Discovery

"Which road do I take?": Getting Lost in Sexual Identity Models

Biology and psychology lay the foundation for sexual identity development. Development begins through a combination of genetics, physiology and other biological predispositions, forming an individual's desire. Desire can be emotional, physical or relational. This is then affected by one's culture and social context, altering the definitions

and implication of same sex desire and influencing the individual's behaviours and their definition of such behaviours (Hammack, 2005). Across sexual identity developmental models there are many similar themes. These most commonly include: sensitization or an awareness of difference; self-recognition, where feelings of difference cause internal conflict leading to identity repression, passing as heterosexual, or decision making regarding whether or not to disclose one's identity; and disclosure to others about one's sexual identity (Eliason, 1996; McCarn & Fassinger, 1996; Savin-Williams, 1990). Models described in the literature fall under three main approaches: a dimensional approach (e.g. Eliason, 2009; Horowitz & Newcomb, 2001; Jones & McEwen, 2000; Mohr & Fassinger, 2000); a description of milestones (e.g. D'Augelli, 1994; Dube & Savin- Williams, 1999); and a description of sexual identity development in various stages or phases (e.g. Carrion & Lock, 1997; Cass, 1979; Coleman, 1982; Kus & Saunders, 1985; McCarn & Fassinger, 1996; Milton & MacDonald, 1984; Sophie, 1986; Sullivan, 1998; Troiden, 1988, 1989). Dimensional and milestone models provide a checklist of specific factors and/or behaviours implicated in sexual identity development, such as kissing a member of the same sex or the presence of internalised homonegativity. In contrast, stage and phase models describe experiences of LGBQ+ identities. That is, they capture the progression from the awareness of difference to the decision making process of articulating and consolidating a stable LGBQ+ identity.

The aim of the current research was to use a model, which examined the progression through sexual identity development to a coherent sexual self-concept and how this progression is related to/associated with psychological well-being. Dimensional and milestone models do not provide descriptions on this progression, and so do not provide a comparison of the steps in development. Thus, dimensional and milestone models are not explored further in this review. The remainder of the literature review will focus on stage and phase models of sexual identity development.

"It's just a Stage... I mean, Phase?": Stage and Phase Models of Sexual Identity Development

The majority of sexual identity developmental models take the form of stage models (e.g. Cass, 1979; Coleman, 1987; McCarn & Fassinger, 1996; Milton & MacDonald, 1984; Troiden, 1988, 1989). These models tend to focus on the internal process of developing an identity, describing personal identity development, and some

reference to group identity development. This has provided a step-by-step heuristic of what individuals with LGBQ+ identities may experience (Cass, 1979; Savin-Williams, 1990; Troiden, 1988, 1989). Many stage models have similar themes in describing their conceptualisations of sexual identity development (Savin-Williams, 1990). Troiden (1988, 1989) and Kus and Saunders (1985), for instance, both proposed a four stage model. Troiden's model suggests identity development begins before puberty when the individual experiences general feelings of marginalisation due to feelings of difference when compared to their peers (stage one: sensitisation). This is similar to Kus and Saunder (1985) who proposed sexual identity development begins with feelings of difference, creating incongruence between personal and societal attitudes. The issue with these models, and others of sexual development, is the lack of supporting evidence for their model. Given that there are models with research support, the above models were not used or explored further.

According to Cox and Gallois (1996), one of the most sophisticated and comprehensive stage models of sexual identity development was presented by Vivienne Cass. This model was based on her clinical experience working with gay clients, and rests on interpersonal congruence theory (Cass, 1979). This theory suggests individuals with same sex experiences develop and disclose a LGBQ+ identity because they are motivated to establish congruence between their personal view of self and the view others have of them (Cox & Gallois, 1996; Degges-White, Rice & Meyers, 2000; Levine, 1997; Polzer et al., 2002). This model has six stages in the developmental process. It begins with identity confusion, where the individual recognises homosexuality as being relevant to them. This causes the realisation their experiences may not be consistent with a heterosexual identity, resulting in identity conflict. Next, the individual begins to compare their self-portrayal as a heterosexual person and the potential of a LGB identity (identity comparison). In identity tolerance (stage three), the individual is more committed to the potential of their LGB identity by exploring their social, emotional and sexual needs, and considering their future direction. Gradually, there is an increasing self-acceptance, developing a preference in LGB social contexts as they facilitate this acceptance. At this stage (identity acceptance), the individual begins to disclose their sexual identity. Next, in identity pride there is an increased awareness of societal differences between heterosexual and LGB+ identities, causing devaluation of heterosexual individuals and the positive reappraisal of LGB individuals. It may, also, be associated with an activist approach to societal presumptions

with statements such as “how dare you assume I’m straight” being common. The final stage, identity synthesis, is when the individual’s dichotomous view of ‘us versus them’ between heterosexual and LGB+ identities is eroded, as it is not a truthful representation of people. Also, the person integrates their sexual identity into themselves as a whole (Cass, 1979). This model represents similar themes as the models previously describe, yet it comprehensively describes the internal process.

Despite their popularity, stage models have been criticised for a number of reasons. Firestein (2007) critiqued them for their Eurocentric, white, gay male focus. For example, Troiden (1989) assessed his model on gay men and Cass’ (1979) model was developed specifically for homosexual identity development. Diamond (2006) also criticised stage models for their presumption that sexual identity exists as a dichotomy between heterosexual and gay identities. Although developed for gay identity development, over time the Cass (1979) model has been tested with bisexual-identified participants (Degges-White et al., 2000; Halpin & Allen, 2004; Risco, 2008). Furthermore, Diamond stated models of sexual identity development are too simple and assume a linear process. In partial agreement with this, Cass (1979) suggests the diversity of sexual identities and their development cannot be fully captured by one model. Rather these models are a heuristic that should be individualised for each person. Cass, however, does assume a linear development, and so is not immune to Diamond’s critique. The final critique, and most important, is that most stages models do not have empirical support. The Cass model, unlike other models, does have partial support. Recent research however questions its efficacy in the current social climate (e.g. Brady & Busse, 1994; Cass, 1984). Kenneady and Oswalt (2014) concluded in some environments similar to Western society three decades ago, Cass’ model may still be appropriate, yet in other environments the model may not. Thus, Cass has been able to overcome some criticisms made against stage models, yet it may not be appropriate for current Western societies, where there is a move for greater acceptance for diversity.

In order to combat some of the criticism made against stage models, McCarn and Fassinger (1996) created a sexual identity development model consisting of phases, rather than stages. This substitution of vocabulary was done explicitly in order to imply greater flexibility and movement between phases. According to the Oxford Dictionary (2011), a stage is a fixed step in a process, whereas a phase is “a period in a process of change” (p. 1075). This implies less restriction and greater blurring between the boundaries of phases.

The proposition of blurred boundaries provides a more realistic representation of the subjective nature of sexual identity development as it is rarely clear-cut what stage/phase people are in. Additionally, McCarn and Fassinger provide a model consistent with the general identity literature, describing a branch for both personal and social identity development. These branches have four phases: Awareness, Exploration, Deepening/Commitment, and Internalisation/ Synthesis (as seen in Figure 4, page 29). While the described phases appear similar to stages, the characteristics refer to the central part of each phase, and so as someone transitions between phases they may have features of several phases, rather than having specific boundaries. Furthermore, McCarn and Fassinger propose although the phases in each branch of development are presented in a linear progression, they conceptualise the developmental progression as circular and continuous, affected by each new relationship and context. Thus, McCarn and Fassinger's model of LGBQ+ sexual identity formation combats some criticisms, such as Diamond's (2006) assertion that LGBQ+ sexual identity models are linear, when this is not always the case.

In individual identity development, the first described phase (Awareness) involves an increased awareness of being different compared to others. This difference may be a broad divergence from their peers or their gender group, or a specific sense of difference due to their feelings or desires. The individual does not begin to recognise these experiences as related to their sexual identity label, they simply realise they do not conform to the presumed heterosexual norms. In the Exploration phase, the individual begins to examine their feelings and attractions, which may be associated with strong feelings or relationships for a member of the same sex. This exploration does not necessarily consist of the experimentation with sexual behaviours. During this phase many questions may arise, and are examined to gain a better understanding of personal experiences. The next described phase, Deepening/Commitment, is characterised by the decision-making process around an individual's sexuality, based on the knowledge they have accumulated. This process may involve labelling one's experience, or a change in attitude around sexuality. There is generally an increased self-awareness and a sense of sexual clarity, creating feelings of satisfaction in self and sexuality. Finally, Internalisation/Synthesis refers to a general acceptance of personal sexual identity, and a sense of clarification, consistency and certainty about one's sexual identity. It involves the incorporation of one's sexual identity into the person's holistic self-concept, associated

with feelings of internal stability, and an unwillingness to change (McCarn & Fassinger, 1996).

The movement through development has been described as a linear fashion, yet the authors stated development may progress in a circular manner. As the social environment of the individual changes, such as a new relationship, the developmental process may be cycled through more than once. Therefore, this model proposes individuals can go through the phases a number of times, depending on their context. McCarn and Fassinger suggest although movement in individual and group identity branches is independent from each other, it is unlikely an individual would progress to the final phase of individual identity branch without some movement in the group identity branch.

In group identity development, Awareness refers to the recognition the heterosexual identity, though thought to be mandatory, is not a universal norm. The individual becomes more aware of the existence of LGBQ+ individuals and the LGBQ+ community. This newfound awareness may be associated with feelings of confusion and bewilderment. When the individual explores and attains knowledge surrounding people with LGBQ+ identities and their community, they are said to be in the Exploration phase. For example, a person may become a member of internet groups, or a consumer of LGBQ+ television shows and movies. For individuals who previously held homophobic convictions and those with limited access to resources and information, this process may be difficult. Those with strong homophobic convictions may have feelings of anger or guilt as they were ‘tricked’ to participate in heterosexism. For others, however, this phase may be associated with curiosity and excitement. The Deepening/Commitment phase involves a growing awareness of societal attitudes and treatment of LGBQ+ individuals and its community. It is also associated with a deepening connection to the LGBQ+ community and an awareness of its’ unique value. The combination of these may result in an ideological and emotional transformation. For some, this may result in the rejection of the heterosexist society, and some may become activists against heteronormativity. For others, the reaction to this transformation is not this intense. Many emotions may be associated with this process, such as pride, excitement and/or rage. Finally, Internalisation/Synthesis is when the individual is ready to identify with the LGBQ+ community and internalise their personal definition of the groups identity, synthesising it into their overall social identity. The individual has moved through conflict and re-evaluation of being a member of a minority group, and has re-defined what being a member of such a group means. This

is thought to instil feelings of satisfaction, security and consistency across different contexts (McCarn & Fassinger, 1996). Figure 4 provides an example of the model and examples of statements from men in each phase.

Individual Sexual Identity	Group Membership Identity
	<i>1. Awareness</i>
- of feeling or being different	- of existence of different sexual orientations in people
Examples (for men):	
	“I wonder if there is something strange about me.” (I)
	“I had no idea how many gay people are out there” (G)
	<i>2. Exploration</i>
- of strong/erotic feelings for same sex people or a particular same-sex person	- of one’s position regarding gay people as a group (both attitudes and membership)
Examples (for men):	
	“I want to be closer to men or a certain man.” (I)
	“I think a lot about fitting in as a gay man and developing my own gay style” (G)
	<i>3. Deepening/Commitment</i>
- To self-knowledge, self-fulfilment, and crystallization of choices about sexuality	- To personal involvement with reference group, with awareness of oppression and consequences of choices
Examples (for men):	
	“I might be willing to live with a male lover.” (I)
	“I get angry at the way heterosexuals talk about and treat lesbian and gays” (G)
	<i>4. Internalisation/Synthesis</i>
- of love for same-sex people, sexual choices, into overall identity	- of identity as a member of a minority group, across contexts
Examples (for men):	
	“I feel a deep contentment about my love of other men.” (I)
	“I rely on my gay/lesbian friends for support, but I have some good heterosexual friends as well” (G)

Figure 4. McCarn and Fassinger's proposed model of sexual identity development with example statements appropriate for men; extracted from Fassinger and Miller (1997, p. 57).

Note: This figure was retrieved from the Journal of Homosexuality. Copyrighted 1997 by the Haworth Press.

Research into this model has found support for its formulation of sexual identity development. Initially, this was developed to describe lesbian identity formation.

Nevertheless, Fassinger and Miller (1997) conducted a study validating the model in a sample of gay men. Each participant was given items on card with brief descriptions and were asked to place them in two categories (individual identity development and group identity development); then to organize the categories in chronological order. This study found support for the theoretical model due to the successful distinction made by participants, with clearer distinctions at earlier and later phases of the developmental branches. This study concluded the model would be appropriate in use with gay men, and suggested it offers promise in conceptualising bisexual identity development (Fassinger & Miller, 1997). Paul and Frieden (2008) provided further support through a qualitative study, finding the developmental processes discussed by their participants were best conceptualised by this model. Lynch (2005) conducted a survey interested in the relationship between sexual identity development and the participation of people in LGBT organisations. Lynch used McCarn and Fassinger's theoretical model finding both support for and challenges of the model. The author reported items of some phases within the group identity branch did not correlate well with each other, limiting the reliability of the model. This study also challenged the assertion that disclosure is not necessary for development as it found disclosure was significantly related to LGBQ+ sexual identity development. This suggested although it may not be necessary, it was intricately related to development. Additionally, the study found partial support for the utility of the model. For example, the study demonstrated participants endorsing items in earlier phases were less likely to endorse items from later phases of the model (Lynch, 2005). Thus, McCarn and Fassinger's (1996) model has had support from the literature, despite being utilised less than the Cass model.

In addition to empirical support, the McCarn and Fassinger model addresses some of the main issues of sexual identity development models discussed earlier. The model was created by researching the LGBQ+ sexual identity development of female participants, then was validated with male samples, addressing the issue of a gay male focus (Paul & Frieden, 2008). Although not commenting on ethnic sexual identity development as other models have been criticised, McCarn and Fassinger (1996) leave room for the incorporation of cultural and contextual factors into the developmental model. They do so by stating disclosure of identity is not essential for identity development. The authors suggested social context is an important consideration before disclosing one's identity, and so it would be wrong to suggest the absence of disclosure is a developmental delay. In

oppressive contexts it is unlikely, and may be unwise, for a person to disclose a LGBQ+ identity (Risco, 2008). Diamond (2006) provides two additional critiques of sexual identity developmental models: first, the assumption of a linear process; and second, the suggestion having a label for one's identity is better than not having one, perpetuating the gay-heterosexual dichotomy. McCarn and Fassinger explicitly state development is "continuous and circular; every new relationship raises new issues about individual sexuality, and every new context requires renewed awareness of group oppression" (p. 522). They describe development as a deepening understanding of one's sexuality, creating greater self-awareness and sexual clarity. This may result in labelling one's sexual identity, yet is not the focus of development. They also mention some women may acknowledge relationships with women as being only one option and may identify as bisexual, extending from the gay-heterosexual dichotomy. Liddle (2007) offered one of the few critiques specific to this model, stating the model does not mention any potential individual differences affecting development, such as response to stigma and discrimination. Although not describing specific factors affecting development, the model does suggest the need to consider the individual's context. This provides an opportunity for the incorporation of internal and external stressors affecting development as suggested by the literature. Overall, McCarn and Fassinger have developed a model that has had empirical support in the literature, and combats critiques laid against past models.

McCarn and Fassinger (1996) have left room for the consideration of many factors that may affect development. Due to the plethora of possible factors associated with development this research has had to narrow down the number chosen to investigate. The main aim of identity development is to create a positive and coherent identity, and so for this reason this study aimed to explore factors associated with a positive identity. Feldman and Wright (2013) conducted research using the Lesbian, Gay, and Bisexual Identity Scale (LGBIS), which investigates eight identity related-factors associated with a negative (or positive) identity when present in high (or low) levels. In addition to these eight factors, the current research also aimed to explore factors associated to both minority stress theory and cognitive dissonance theory by including disclosure to others, and the presumption of heterosexuality. These factors would allow comparisons to be made between the minority stress theory and cognitive dissonance theory. These factors may also guide comments on potential mediating/moderating factors of the disparities in well-being seen between people with different sexual identities.

“The only true happiness lies in knowing who you are ... and making peace with it” (Hamilton, 2001): Sexual Identity Development and Psychological Well-being

There are psychological benefits from successful sexual identity development. For example, Konik and Stewart (2004) concluded individuals who successfully navigated through LGBQ+ sexual identity development (i.e. were identified to have a stable, coherent identity) had a greater formed global identity, epitomising the common phrase “What doesn’t kill you, makes you stronger” (p. 841). Other authors have found a positive relationship between development and hope, optimism and purpose in life (Moe et al., 2008); as well as self-esteem (Crawford, Allison Zamboni & Soto, 2002; Feldman & Wright, 2013; Rosario et al., 2011; Udall-Weiner, 2009). Some research, however, has contradicted the association between development and self-esteem, suggesting sexual identity development does not affect one’s self-esteem. For example, Rowen and Malcolm (2002) explored how sexual identity development and internalised homophobia influences the well-being of gay men. They found no significant relationship between development and self-esteem, yet demonstrated that development was associated with other factors, such as one’s self-concept of emotional stability (defined as the presence of emotional well-being and absence of psychopathology). Overall sexual identity development has a positive relationship with psychological well-being, despite the presence of some inconsistency in the research.

The cited studies above focus on the differences between the ‘start’ (e.g. exploration and confusion regarding their LGBQ+ identity) and ‘end’ (i.e. a stable, coherent LGBQ+ identity) of development. This reveals a linear positive relationship between sexual identity development and psychological well-being, suggesting as an individual progresses through development their well-being incrementally increases. Fewer studies have described the psychological outcomes for individuals at each step in development, yet this line of investigation has exposed a more complicated relationship. While these studies have generally supported that later parts of development have a positive relationship with well-being, they also have raised doubts about the suggested linear trend (Halpin & Allen, 2004; Kappler, Hancock & Plante, 2013; Swann & Spivey, 2004; Walters & Simoni, 1993). For example, Halpin and Allen (2004) investigated the association between the stages described by Cass’ (1979) model of sexual identity development and psychological well-being, finding a U shaped relationship. Unexpectedly,

individuals in earlier stages of development – such as identity confusion – had similar levels of well-being as individuals in later stages – such as identity synthesis. This study revealed individuals in the middle stages reported the lowest levels of psychological well-being. This suggested middle stages of development were the most vulnerable to psychological ill health. Swann and Spivey (2004) also found a complex relationship using the McCarn and Fassinger (1996) model of sexual identity development. They demonstrated only the final phase of the individual developmental branch was significantly associated with self-esteem. This indicated those who are able to internalise their sexual identity into their whole self-concept are likely to also have higher levels of self-esteem. In the group branch of development, all phases of development were significantly associated with well-being, yet only the final phase had a positive association. Analysis of people in the other phases found a negative association between development and psychological well-being. This suggests until the individual identifies with the LGB community and integrates their version of the group identity into their self-concept, development has a negative impact on psychological well-being. The integration of one's sexual identity is therefore associated with higher levels of well-being, yet within sexual identity development there are many bumps along the road.

The rejection of a linear relationship between psychological well-being and sexual identity development suggests, despite theories such as cognitive dissonance theory, getting to know oneself is not sufficient to improve one's well-being. Cognitive dissonance theory, interpersonal congruence theory and Erikson's model of human development all suggest building a congruent and stable identity provides a foundation to cope with life's stressors and positively affects well-being (Blackman, 1985; Hoffnung et al., 2010). In support of these, Konik and Stewart (2004) found successful LGB+ identity development was associated with a more well-formed global identity (i.e. the summation of an individual's different identities, including, for example, their identity as a daughter/son, their employee identity, and their LGBQ+ identity) when compared to heterosexual participants. Identity certainty has also been found to be positively related to well-being (e.g. Bejakovich, 2013). Progression through sexual identity development presumably increases certainty incrementally, and so would lead to a prediction of a linear relationship between development and well-being. The rejection of the linear trend, therefore, suggests there are more factors affecting psychological well-being during development. Halpin and Allen (2004) suggested a lack of understanding earlier in development may act as a

protective factor. Therefore, when a greater understanding of the challenges faced by those with same-sex experiences is reached – as is the case in the middle phases of development – there is a negative effect on well-being. Research, such as Swann and Spivey (2004), have demonstrated a complex relationship between sexual identity development and psychological well-being, suggesting identity certainty is not sufficient to explain the levels of well-being present during development.

Noted earlier, internalised heterosexism has a negative impact on psychological well-being. Additionally, it is thought to be present most commonly in earlier phases of development. Other factors stemming from this may include concealment motivation, identity disclosure, and acceptance concerns, as well as other sexual identity-specific factors, including identity affirmation, identity superiority, identity centrality, and difficulty with process (Mohr & Fassinger, 2000; Mohr & Kendra, 2011). These inter-related factors are all a part of development in varying degrees. For example, concealment motivation is more common in earlier phases of development. These factors may influence the relationship between psychological well-being and sexual identity development. Following a review of the literature, no studies were found to have directly investigated how these factors, such as identity uncertainty, mediate or moderate this relationship. Studies have, however, shown these factors are associated with psychological well-being (e.g. Elizur & Mintzer, 2001; Lease, Horne & Noffsinger-Frazier, 2005; Meyer, 2012; Moradi, 2009; Pachankis, 2007; Robertson, 2011; Ryan, Huebner, Dias & Sanchez, 2009; Ryan, Russell, Huebner, Dias & Sanchez, 2010; Shilo & Savaya, 2011; Stevens, 2004). Hu, Wang and Wu (2012) explored the relationship between life satisfaction and acceptance concerns (a LGBIS subscale) in a sample of Chinese LGB individuals. They found a negative association between the variables. Those who were more concerned about receiving acceptance from others reported lower levels of satisfaction. This study also demonstrated the degree an individual wishes to conceal their sexual identity fully mediated the relationship between acceptance concerns and life satisfaction, suggesting self-concealment was an important contributing factor in this study (Hu et al., 2012). Burks et al. (2015) and Dyar, Feinstein, Eaton and London (2015) demonstrated higher levels of acceptance concern and concealment motivation are associated with increases in depressive and anxious symptoms. There is little published research on the remaining LGBIS subscales (i.e. Difficult Process, Identity Affirmation, Identity Superiority, and Identity Centrality). Based on their definitions, predictions about their influence of well-

being can be inferred. For example, Difficult Process is defined as difficulty with the developmental process, and so it can be inferred this variable would be associated with reduced well-being. Therefore, in future research the considerations of these factors may help explain the complex relationship between development and well-being presented in the literature.

In summary, research has demonstrated progressing through identity development has a positive relationship with psychological well-being. This research, however, has primarily suggested a linear trend as the majority of studies only compare the ‘start’ and ‘end’ of development. Research investigating the level of well-being within each step in development has presented a more complicated relationship. Although supporting the notion that integration of one’s identity is positively associated with well-being, it suggests earlier phases are affected by more than just self-discovery and an increase in certainty. For this reason, how identity-related factors influence the differences in psychological well-being found between different phases of LGBQ+ sexual identity development needs to be investigated. Following a review of the literature, no studies exploring this directly have been found. The current research therefore decided to initially investigate the relationship between sexual identity development (as described by McCarn and Fassinger, 1996) and psychological well-being. This research sought to explore how sexual identity-related factors (including the presumption of heterosexuality, identity disclosure and those assessed by the LGBIS scale) affect this relationship.

Research Hypotheses

The literature review had identified three fundamental areas requiring investigation in the research. Firstly, research debates the utilisation of categorical or continuum assessments of sexual identity. While there is support of the notion sexuality lies on a continua, studies rarely incorporate an extension of the traditional categories (i.e. gay, bisexual and heterosexual). This is due to practicality, yet this approach is limited by a lack of consensus, resulting in subjective definitions of sexual identity and variability between studies. For example, one study may define gay as the presence of sexual attraction to the same sex, yet another may define it as the presence of sexual behaviour with the same sex. These inconsistent definitions limit the ability to compare studies as the underlying variables (e.g. sexual attraction or sexual behaviour) do not always align.

The second area in need of investigation lies in the inconsistent relationship between sexual identity – and its’ development – and psychological well-being. When studies investigate this relationship, there is a tendency to only compare earlier phases of sexual identity development with the integrated phase. These studies demonstrate a linear relationship between sexual identity development and well-being. However, studies that explore how each step in development affects well-being have found there is a significant, but complex association between development and well-being.

The final area of investigation highlighted enquiries about why there is not a consistent and linear trend between development and well-being. Studies have mentioned potential reasons regarding the cause of this complex trend. Halpin and Allen (2004) suggested there was a dip in well-being in middle stages of development because of an increased awareness of oppression and the lack of support or ability to cope with this newfound awareness. Studies (such as Halpin and Allen), however, have not directly explored how certain factors, such as identity uncertainty and internalised homonegativity, affect the relationship between sexual identity development and psychological well-being. These factors are important to consider because internal experiences related to sexual identity are likely to influence the interaction between identity development and psychological well-being as has been hypothesised by the literature. Thus, this research has explored this hypothesis by examining identity-specific dimensions, including the presumption of heterosexuality, identity disclosure and those outlined by Kendra and Mohr (2011).

These areas require further investigation, and so three underlying aims were created for this doctoral dissertation. The first was to explore the conceptualisations of sexual identity, by extending self-reported sexual identity categories. The second aim was to examine the relationship between sexual identity development and psychological well-being. The third aim was to investigate the factors that influence this relationship. These have, in turn, resulted in the following research hypotheses.

Sexual Identity Continuum

Since the time of Kinsey et al. (1948) there has been the suggestion a continuum better conceptualises sexual identity, but most research has taken a categorical approach, offering participants a trichotomous decision – heterosexual, bisexual and gay/lesbian. However, the intricacies of sexual identity are better understood as a spectrum of many

components. Epstein et al. (2012) developed a measure which places an individual on a 14 point sexual orientation continuum, based on an individual's reported same and opposite sex attractions, fantasies and behaviours. The current research aimed to replicate the findings of Bejakovich (2013) which were based on Epstein et al. (2012) and reported mean sexual orientation (MSO) and the sexual orientation range (SOR). The MSO is the estimated placement on the sexual orientation continuum, where 0 is exclusively heterosexual (or the presence of only opposite sex experiences) and 13 is exclusively gay/lesbian (or the presence of only same sex experiences). That is, the numerical position (i.e. MSO) of an individual is their placement along a diverse continuum. The numerical positions do not infer a label, rather they assign a placement based on the degree of one's same and opposite sex experiences. Figure 5 demonstrates this concept, and highlights the placement equivalent to the numerical position of 7. In Figure 5, the clear part of the figure represents the level of hypothesised opposite sex experiences, whereas the shaded part represents the proportion of same sex experiences. This MSO position is characterised by same and opposite sex experiences where both are at the same level, and are at their highest point. The SOR, on the other hand, represents the range of one's sexual experiences, estimating the individual's range of attractions, fantasises and behaviours toward members of the same and opposite genders. That is, how far up or down the individual is likely to move along the spectrum. Another way SOR may be viewed is as the individual's sexual flexibility. Thus, if an individual reported few opposite sex experiences and many same sex experiences, their SOR would be small, suggesting restricted fluidity. On the other hand, if an individual reported many opposite and same sex experiences, their SOR would be large and they may be described as being very sexually fluid. Figure 5 therefore indicates this hypothetical participant ranges in sexual experiences by 4, or plus or minus 2 from the MSO (7).

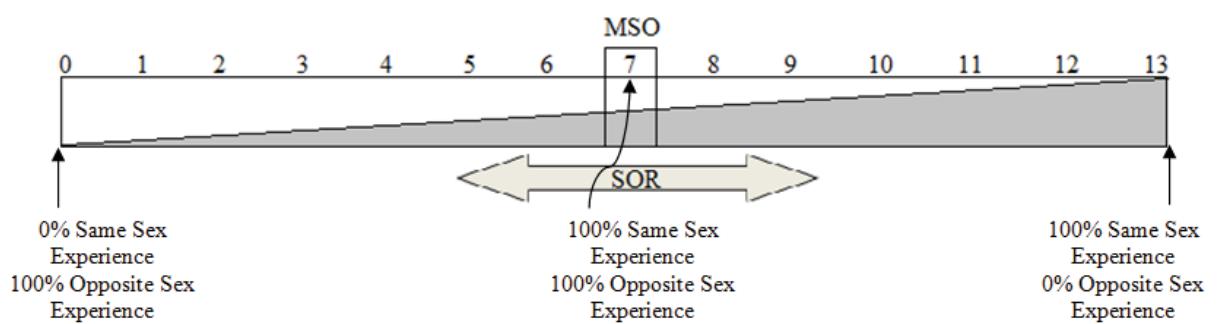


Figure 5. Degree of same and opposite sex experiences present at each placement (MSO) on the sexual identity continuum and the presence of the range of one's sexuality (SOR).

This research has also been inspired by the continuum-based approach to extend the range of labels offered to participants from the traditional three categories (i.e. gay, bisexual and heterosexual), providing greater diversity. Therefore, it has added mostly heterosexual and mostly gay/lesbian as was suggested by Savin-Williams and Vrangalova (2012). This research has referred to groups not identifying as heterosexual or mostly heterosexual as LGBQ+ identities (the plus demonstrates respect for a number of alternative identities not named in the research).

Hypothesis 1: The sexual identity categories (i.e. heterosexual, mostly heterosexual, bisexual, mostly gay/lesbian, lesbian/gay, questioning and other) were expected to differ by the MSO computed from the various same and opposite sex attractions, behaviours and fantasises of the Epstein Sexual Orientation Inventory. Specifically, people with heterosexual identities were hypothesised to have the lowest MSO, indicating the highest degree of opposite sex experiences and lowest degree of same sex experience. Whereas those identifying as gay/lesbian were predicted to have the highest MSO (i.e. highest level of same sex experiences and lowest level of opposite sex experiences). The remaining identities were hypothesised to have MSOs that fall between people with heterosexual and gay/lesbian identities.

Hypothesis 2: The sexual identity categories were predicted to differ by their sexual orientation range (SOR), which estimates an individual's fluidity between same sex and opposite sex experiences. More specifically, those with heterosexual and gay/lesbian identities were hypothesised to have the lowest SOR and bisexual-identified individuals were expected to have the highest SOR. Predictions have been made based on the qualitative definitions assigned by literature, as research has only recently included questioning, mostly heterosexual and mostly gay/lesbian as sexual identity options. Therefore, the predicted order of sexual identities categories, beginning with the largest to smallest SOR is as follows: bisexual identities; questioning; other; mostly heterosexual and mostly gay/lesbian; gay/lesbian identities; and heterosexual identities.

Sexual Identity and Identity-Specific Dimensions

Minority stress theory discusses how minority sexual identities, such as gay/lesbian, may experience identity-specific stressors. These stressors are experienced to some degree by all sexual identities that do not align with societal expectations (i.e. heterosexuality). Kendra and Mohr (2011) outlined a number of sexual identity-specific

dimensions (positive and negative), which include common stressors experienced by LGBQ+ communities. Table 1 presents the variables associated with LGBQ+ identities investigated by this research, including presumption of heterosexuality, identity disclosure and variables measured by the Lesbian, Gay, and Bisexual Identity Scale (LGBIS). Research proposes these identity-specific dimensions have an impact upon the well-being of sexual minorities. For this reason, having a clear understanding of the levels of these dimensions across various sexual identities is important in order to gain a greater understanding of differences in well-being between sexual identities. Specific hypotheses have been made for dimensions which have been thoroughly explored by past literature. However, exploratory hypothesis have been created for the remaining dimensions.

Table 1.

Sexual identity dimensions investigated in the doctoral research.

Sexual identity Dimensions
Presumption of Heterosexuality
Identity Disclosure
Acceptance Concerns *
Concealment Motivation *
Identity Uncertainty *
Internalised Homonegativity *
Difficult Process *
Identity Affirmation *
Identity Superiority *
Identity Centrality *

Note: * refers to subscales of the Lesbian, Gay, and Bisexual Identity Scale

Hypothesis 3: Bisexual and non-binary sexual identities have been found to report more identity confusion and less identity disclosure when compared to their gay/lesbian counterparts (Barker et al., 2012). Non-binary sexual identities have been defined in this research as identities that do not fall within heterosexual or gay/lesbian definitions, and so may include a variety of identities (e.g. bisexual, pansexual, queer). People with these identities also report higher levels of internalised homonegativity (Sarno & Wright, 2013). Therefore, people with bisexual and other non-binary identities were predicted to have higher levels of identity uncertainty and internalised homonegativity, and lower levels of identity disclosure when compared to gay/lesbian identities.

Hypothesis 4: In addition to identity uncertainty and internalised homonegativity, Mohr and Kendra's (2011) LGBIS scale has six other variables proposed to be associated with a positive sexual identity. These include Acceptance Concerns, Concealment Motivation, Identity Affirmation, Identity Superiority, and Identity Centrality. These variables however have received limited research regarding their connection to well-being. Therefore, the current study has decided to explore these variables because, while these variables have received little attention by research, studies such as Hu et al. (2012) highlight the influence of these variables on well-being. Presumption of Heterosexuality was also investigated in this research. As non-binary identities have been typically associated with more internalised homonegativity and identity uncertainty than gay/lesbian identities, similar trends were expected for these variables. That is, people with non-binary identities were predicted to have higher levels of Acceptance Concerns, Concealment Motivation, and Difficult Process, and lower levels of Identity Affirmation, Identity Superiority and Identity Centrality. People with non-binary identities are likely to have more opposite sex experiences than those who identify as lesbian/gay, resulting in more people presuming they are heterosexual. Therefore, people with non-binary identities were expected to report more experiences of the presumption of heterosexuality.

Sexual Identity and Psychological Well-Being

Individuals who identify with LGBQ+ identities report lower levels of psychological well-being than their heterosexual counterparts. Those identifying as bisexual and questioning report more mental health difficulties when compared to both heterosexual and gay/lesbian identities (e.g. Haas et al., 2010; Espelage et al., 2008). Psychological well-being research, however, has not frequently separated LGBQ+ identities in analysis, rather grouping all identities, except those identifying as heterosexual, together, using heterosexually-identified participants as a reference point for analysis. Studies which have separated the LGBQ+ groups demonstrated differences in psychological well-being between these individuals (e.g. Bejakovich, 2013; Kertzner et al., 2009; Russell, Ryan, Toomey, Diaz & Sanchez, 2011). Minority stress theory, cognitive dissonance theory and interpersonal congruence theory highlight numerous sexual identity-specific dimensions which may account for the presence or absence of differences in well-being. The influence of these dimensions has not been directly investigated. Taking all this together, this research aimed to: first, explore the relationship between sexual identity categories in terms of their psychological well-being; and second, investigate how identity-

specific dimensions influence the differences between individuals with different sexual identities and their psychological well-being.

Hypothesis 5: Heterosexually-identified participants were hypothesised to have the higher levels of psychological well-being (i.e. the highest levels of positive affect, self-esteem, general happiness and life satisfaction, and the lowest level of anger and negative affect). Research investigating further into the differences between other sexual identities in their reported well-being has not been consistent. However, self-reported identities associated with same and opposite sex experiences (i.e. bisexual, questioning or other) were predicted to report lower levels of psychological well-being when compared to participants identifying as lesbian/gay.

Hypothesis 6: As this research endeavours to demonstrate the utility of incorporating a continuum approach, the relationship between sexual orientation continuum measures was also examined. Research has demonstrated same sex attractions have a negative relationship with well-being. This means individuals who report same sex attractions also report lower psychological well-being than those who do not report these attractions. This finding was true for all sexual identities, including individuals with heterosexual identities (Jager & Davis-Kean, 2011). Therefore, same sex experiences were hypothesised to be negatively associated with well-being variables, regardless of sexual identity. It is also important to examine why non-binary identities were associated with more negative outcomes when compared to heterosexual and gay/lesbian identities. Non-binary identities, such as bisexuality, likely express a greater range in sexual experiences (i.e. attractions, fantasies and behaviours) and so their sexual range (i.e. SOR) may impact psychological well-being. Therefore, the connection between SOR and well-being was explored, and it was predicted SOR would be negatively associated with well-being.

Hypothesis 7: Minority stress theory, among others, suggests there are dimensions specific to minority sexual identities which have a role in their well-being. This doctoral research assessed whether controlling for significant sexual identity-specific dimensions alter the relationship between sexual identity and well-being. More specifically, the significant differences in psychological well-being between people with different sexual identities were hypothesised to be eliminated once controlling for the identity-specific dimensions presented in Table 1 (page 39).

Sexual Identity Development, Identity-Specific Dimensions, and Psychological Well-Being

Sexual identity development is a part of global identity development distinguished by the conscious exploration of sexual fantasies, attractions and behaviours. The building awareness of self has been characterised as a positive factor for psychological well-being. Research investigating the relationship between each phase of development and well-being paints a different story (Halpin & Allen, 2004; Rosario et al., 2006; Swann & Spivey, 2004). That is, those with an awareness of difference (i.e. an early phase in development) and those integrating one's sexual identity (i.e. a later phase of development) have reported higher levels of psychological well-being than those exploring their sexual identity (i.e. middle phases of development).

Hypothesis 8: Based on Swann and Spivey (2004), the fourth phase of development in either the individual and group developmental branch, Internalisation/Synthesis, was expected to be associated with higher levels of well-being when compared to the remaining phases. Each phase of development is likely to be associated with specific identity-related factors which may influence well-being. The Synthesis phase has been described to be associated with a sense of clarity and coherence, alleviating cognitive dissonance and internal stress and reducing negative mediators of well-being. Descriptions of the model can be reviewed on pages 25 and 26.

Hypothesis 9: Due to the lack of past research, the following hypothesis is exploratory. It was hypothesised individuals in different phases of development would have different levels of minority sexual identity-specific dimensions (see Table 1, page 39). As certain dimensions are thought to be present to higher degrees in earlier phases of development the following hypothesis was made: Earlier phases of development are predicted to have higher levels of Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, Difficulty Process and the Presumption of Heterosexuality when compared to later phases of development; and Later phases of development were expected to have higher levels of Identity Superiority, Identity Centrality, and Identity Disclosure than earlier phases of development.

Hypothesis 10: Past research has not directly investigated the influence of identity-specific dimensions on the differences in psychological well-being between phases of sexual identity development. Research proposes there are differing levels of identity-

specific dimensions (see Table 1, page 39) between the phases of development. Sexual identity-specific dimensions are also associated with psychological well-being (e.g. Balsam & Mohr, 2007). Therefore, it may be inferred controlling for these dimensions would have an influence on the differences in psychological well-being between people in different developmental phases. The significant differences seen between people in differing developmental phases were predicted to be eliminated or reduced, once controlling for identity-related dimensions associated with well-being or development. For example, imagine identity uncertainty was significantly associated with well-being or varied significantly between the phases of development. Once controlling for this variable, the hypothetically significant difference in well-being between developmental phases would be expected to disappear.

Chapter 3: Methodology

Recruitment of Participants

This project used web-based, snowball sampling. This was accomplished in a number of ways: online distribution through numerous social media pages, including Facebook, Twitter, Tumblr and the Asexual Network Forum (Advertisements can be seen in Appendix A, page 147). It was also placed on institutional web pages, such as the Massey University survey page (URL: http://www.massey.ac.nz/massey/learning/departments/school-of-psychology/research/research-surveys/research-surveys_home.cfm), and distributed by emailing lists, such as the Massey University psychology graduate emailing list.

Prior to posting the online survey link on social media pages, the page coordinators were contacted to ask permission to place the survey link on their page (seen in Appendix A, page 147). Many Facebook pages and Twitter accounts were contacted in order to increase the distribution of the survey. The researcher focused on Facebook pages and Twitter accounts, which were primarily subscribed to by individuals identifying as LGBQ+. When the administrator of the account or page replied, a post was placed on that individual's or group's page. An example of the Facebook status used for the survey was as follows:

Hey Guys!

I'm doing my Doctorate, and my research project is looking at the connection between acceptance, identity development and sexual identity with psychological well-being. Anyone over the age of 16 (straight, gay/lesbian, bi, still figuring it out or any other sexual orientation) can take part and I'd be so grateful!!! The link is:

<https://qasiasingleuser.asia.qualtrics.com/SE/...>

Also If you could please share this on your pages and like my page, that would be great.

<https://www.facebook.com/pages/Research-All-sexual-identities-and-well-being/822318664496627>

THANK YOU!!!

The author also created a list of organisations (which had a LGBTQ+ focus), such as Rainbow Youth, and professors or senior lecturers from various institutions, such as universities from other countries. This was done in order to reach a wider variety of people and so the survey would reach many different countries. Members of the list were emailed requesting their help to distribute the online survey. The email letter was sent by the researcher (typically to organisations, rather than universities) or her research supervisor (typically to the professors or senior lecturers so the email was not considered spam). A copy of the email can be seen in Appendix A (page 147). The survey was available from April 2015 to September 2015.

This research project had the following inclusion criteria for participation: individuals must be the age of 16 or over; have access to the internet and the technological capabilities to complete an online survey; and the ability to understand and respond in English.

Measures

A number of variables were examined in this doctoral research: Sexual identity – self-reported and Epstein Sexual Orientation Inventory (ESOI, continuum measure); Outness Inventory (identity disclosure); heteronormativity; environmental acceptance; sexual identity development questionnaires (Lesbian Identity Questionnaire, LIQ, and Gay Identity Questionnaire, GIQ); Lesbian, Gay, Bisexual Identity Scale (LGBIS, sexual identity-specific dimensions); and the psychological well-being variables (Affectometer 2, Life Satisfaction, General Happiness, Rosenberg's Self-Esteem Scale, and PROMIS Emotional Distress—Anger—Short Form). Several of these measures investigate different aspects of sexual identity. Sexual identity measures – self-reported and ESOI – describe the participant's identity. Sexual identity development questionnaires (LIQ and GIQ) assigned the participants into phases of individual and group LGB+ sexual identity development. The LGBIS measures the level of a participant's endorsement of specific dimensions related to minority sexual identities. Below are more detailed descriptions of these measures. A copy of the online survey can be seen in Appendix B (page 151).

Sexual Identity. This was assessed in two ways: self-reported identity and the Epstein Sexual Orientation Inventory (ESOI). It was asked firstly in the following manner: “*Which label best describes your sexual identity?*”. This item had seven options: straight, mostly straight, bisexual, mostly gay/lesbian, gay/lesbian, questioning, and other.

Those who identified themselves as ‘other’ were then asked to specify their identity. A significant number of participants who had chosen ‘other’ identified themselves as pansexual and asexual. For this reason, these categories were added and their identities were re-coded from other into the new groups (i.e. pansexual and asexual, depending on their specification) prior to analysis. The remaining participants identifying as ‘other’ were not recoded and so were analysed under the sexual identity category ‘other’.

The second type of assessment of sexual orientation made use of the ESOI (please refer to Appendix B, page 154). This is an 18-item questionnaire, which assesses an individual’s attractions, fantasies, and behaviours toward both the opposite and same sex, placing them along a 14-point continuum. Examples of the items on this questionnaire can be seen in Table 2.

Table 2.

Items in the ESOI, their response options and their classification.

Same-sex interactions	Response Option	Attraction/ Fantasy/ behaviour
1. Have you ever felt sexually attracted to a member of the same sex?	0: No, 1: Yes	Attraction
2. How strongly are you attracted to members of the same sex?	0: Not at all, 1: moderately, 2: Strongly	Attraction
3. Have you ever had a dream about a sexual encounter with a member of the same sex?	0: No, 1: Yes	Fantasy
4. Have you ever had a waking fantasy about a sexual encounter with a member of the same sex?	0: No, 1: Yes	Fantasy
5. Have you ever felt sexually aroused when you’ve had any exposure to two people of your same gender having a sexual encounter (through gossip, a video, or some other means)?	0: No, 1: Yes	Behaviour
6. Have you ever voluntarily had sexual contact (such as kissing or petting) with a member of the same sex?	0: No, 1: Yes	Behaviour
7. Would you be willing to have sexual relations with someone of the same sex?	0: No, 1: Maybe, 2: Yes 0: Never have them, 1: Occasional, 2: Frequent	Behaviour
8. How frequent are your same-sex fantasies or dreams?	0: Never have them, 1: Occasional, 2: Frequent	Fantasy
9. How frequent are your same-sex encounters?	0: Never have them, 1: Occasional, 2: Frequent	Behaviour
Opposite-sex interactions		
1. Have you ever felt sexually attracted to a member of the opposite sex?	0: No, 1: Yes	Attraction
2. How strongly are you attracted to members of the opposite sex?	0: Not at all, 1: moderately, 2: Strongly	Attraction

3. Have you ever had a dream about a sexual encounter with a member of the opposite sex?	0: No, 1: Yes	Fantasy
4. Have you ever had a waking fantasy about a sexual encounter with a member of the opposite sex?	0: No, 1: Yes	Fantasy
5. Have you ever felt sexually aroused when you've had any exposure to two people of your opposite gender having a sexual encounter (through gossip, a video, or some other means)?	0: No, 1: Yes	Behaviour
6. Have you ever voluntarily had sexual contact (such as kissing or petting) with a member of the opposite sex?	0: No, 1: Yes	Behaviour
7. Would you be willing to have sexual relations with someone of the opposite sex?	0: No, 1: Maybe, 2: Yes	Behaviour
8. How frequent are your opposite-sex fantasies or dreams?	0: Never have them, 1: Occasional, 2: Frequent	Fantasy
9. How frequent are your opposite-sex encounters?	0: Never have them, 1: Occasional, 2: Frequent	Behaviour

The sums of these items constitute two scales: items 1 to 9 create the opposite sex scale; and items 10 to 18 generate the same sex scale. Both scales can range from 0 to 13, and are used to create an overall mean sexual orientation (MSO) and a sexual orientation range (SOR).

The MSO is produced by a three-step calculation. First, the opposite sex scale must be reversed (i.e. 13 becomes 0, 12 becomes 1, and so on) in order to anchor opposite sex experiences at the beginning of the continuum (i.e. 0 on the continuum). For example, if a participant scored an 11 on the opposite sex scale, this would be reverse scored for the calculation of the MSO, resulting in a 2 (i.e. $13 - 11 = 2$). Second, this reverse score would then be subtracted from the same sex scale. The subtracted score was then divided by two. These final steps (i.e. subtracting and dividing by two) were used to calculate the average between the opposite and same sex experiences, resulting in the MSO. Figure 6 demonstrates a participant whom scored a 13 on the opposite sex scale and an 8 for the same sex. The following calculation represents this individual:

$$\begin{aligned}
 \text{MSO} &= (\text{Same sex scale} + (13 - \text{opposite sex scale})) / 2 \\
 &= (8 + (13 - 13)) / 2 \\
 &= (8 + 0) / 2 \\
 &= 4
 \end{aligned}$$

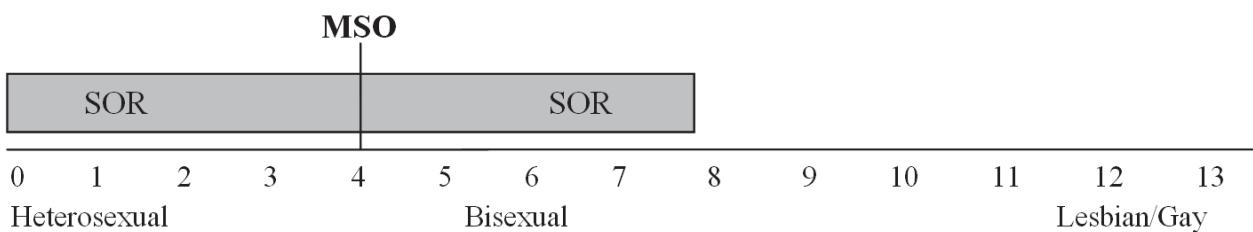


Figure 6. An example of the continua produced by the ESOI, based on a participant with an opposite sex scale of 13 and the same sex scale of an 8.

In this example, the participant has been calculated to have an MSO of 4. This suggests the person endorsed all the opposite sex items (indicating 100% of the opposite sex experiences), while also endorsing some of the same sex items (implying approximately 62% same sex experiences).

There have been three ways devised to calculate the SOR mentioned in Epstein and Robertson (2014):

- as the range between the same sex scale and opposite sex scale (i.e. same sex scale – reversed opposite sex scale);
- a multiplication/division calculation (smaller raw score/13 x larger raw score); or
- Simply defining the SOR by the lesser value of the same and opposite sex scales.

Epstein and Robertson (2014) suggest the latter is the best method for analysis as it eliminates the potential of obtaining a negative SOR. Additionally, the third method captures all possible combinations of same and opposite sex scale score, whereas the previous two methods do not conceptualise all the combinations effectively. For example, the first method would calculate negative SOR scores if the reversed opposite sex scale was higher than the same sex scale. Thus, in alliance with this recommendation, this doctoral research has incorporated the final method for computing the SOR. Therefore, in the above example, the SOR is computed in the following manner:

$$\text{SOR} = (\text{Lesser value: Same sex scale or Opposite sex scale})$$

$$= \text{Lesser value: } 8 \text{ or } 13$$

$$= 8$$

The above example has been represented in Figure 6 to demonstrate the MSO and SOR along the continuum.

The ESOI has been used in a small number of studies, and so has not yet been extensively studied. Nevertheless, these studies have provided support for its reliability and validity. Epstein et al. (2012) found a relationship between self-reported sexual identity and the calculated MSO score. This provided support for the predictive validity of this instrument. According to Epstein et al., the measure exhibited good internal consistency of 0.90 and 0.87 for the opposite sex and same sex scales, respectively. This was supported by Bejakovich (2013), which demonstrated a Cronbach alpha of 0.86 and 0.71, respectively. Bejakovich also found support for the measure's predictive validity in the same manner as Epstein et al.. The current doctoral research demonstrated excellent internal consistencies for the same sex and opposite sex scale, Cronbach alpha of .92 and .90, respectively.

Outness Inventory. Participants that indicated a LGB+ identity were asked to complete the Outness Inventory (OI, Mohr & Fassinger, 2003). This is an 11 item questionnaire in which participants are asked to describe their openness regarding their sexual orientation to various people in their life, including: their family (mother, father, siblings and extended family), world (acquaintances, straight friends – new and old - and work colleagues – supervisors and colleagues) and religious community (the leaders and its members). The inventory can be seen in Appendix B (page 155). Participants were given the following stem question: “*Use the following rating scale to indicate how open you are about your sexual orientation to the people listed below*”; and were asked to rate these on a scale ranging from 1 (definitely does NOT know about your sexual orientation status) to 7 (person definitely knows about your sexual orientation status, and it is OPENLY talked about). The participants were asked to pick 0 if a category did not apply to them. These 11 items comprised of four scales: Out to Family, Out to World, Out to Religion and Overall Outness (Mohr & Fassinger, 2003). This doctoral research only assessed Overall Outness as not all participants were religious or had nuclear families. Items which the participants endorsed the 0 option (i.e. not applicable) were not included in the scoring procedure. To compute participants Overall Outness, their applicable items were averaged, resulting in a score from 1 to 7, where 7 demonstrated the highest level of identity disclosure. The internal consistencies were found to be acceptable, ranging from 0.79 to 0.91, across a number of studies (e.g. Bejakovich, 2013; Carden, 2009; Carvalho, Lewis, Derlega,

Winstead & Viggiano, 2011; Lewis et al., 2005; Mohr & Fassinger, 2003). Mohr and Fassinger (2003) and Carden (2009) have demonstrated the OI's discriminant and convergent validity. The OI has, therefore, been demonstrated to possess acceptable psychometric properties. In this study, the internal consistency of the overall measure was .87.

Heteronormativity. This was investigated using two items: “*How often do people assume you are 100% straight?*”; and “*How often do you feel society, and its structures (e.g. medical care), presume you are 100% straight?*”, with responses varying on a 5 point likert scale, including *not at all, occasionally, some of the time, often* and *all of the time*. These were created for the purpose of this study. The items were summed and then divided by two to attain an average score. The internal consistency of these items was .63.

Environmental Acceptance. This was a three item self-report measure created by this doctoral research. The items asked participants about the general attitude of their social circle, religion, and area in which they live in a similar manner to the following example: “*Which best describes the attitude of your social circle toward sexual orientation?*”. These questions had a five response format: *Rejecting of same-sex attractions, behaviours and fantasies; Aren't rejecting, but do not like the idea of same-sex attractions, behaviours and fantasies; Aren't supportive or rejecting (i.e. are indifferent) of same-sex attractions, behaviours and fantasies; Aren't supportive, but are accepting of same-sex attractions, behaviours and fantasies; and Supportive and accepting of same-sex attractions, behaviours and fantasies.* An average of the environmental items (i.e. acceptance from one's social circle, acceptance of the area they live in and acceptance from religion) was computed for analysis. The internal consistency between these items was low, where the Cronbach alpha was .43.

Sexual Identity Development Questionnaires. The Lesbian Identity Questionnaire (LIQ) and Gay Identity Questionnaire (GIQ) were developed by Fassinger (2001a, 2001b) for both lesbian and gay identity development. The questionnaires were modified in this study by changing the words gay and lesbian to LGB to make them more inclusive to other sexual identities, such as bisexuality. As these questionnaires focussed on LGBQ+ sexual identity development, participants identifying as heterosexual were not asked to complete these questionnaires. Furthermore, these questionnaires did not include a questionnaire for people identifying their gender as ‘other’ and so these individuals were

not asked to complete these questionnaires. Based on the endorsement of items, participants were placed into a phase of individual and group identity developmental branch of McCarn and Fassinger's model of sexual identity. There are four phases within each developmental branch: Awareness, Exploration, Commitment, and Synthesis (these have been defined on pages 25 and 26). The questionnaire consists of 40 items, using a 7 response format, ranging from strongly disagree to strongly agree. Examples of these items include: "*I believe my attraction and thoughts of people of the same sex are a part of who I am*"; "*I am happy with my sexual orientation and wouldn't change it if I could*"; and "*I am having feelings for people of the same sex*". The remainder of the questions can be seen in Appendix B (page 157).

The scoring of the current questionnaires was two-fold: First, the sum of each phase was calculated. Second, the phase with the highest score in each branch (individual and group developmental branches) was selected as the participant's current phase of development. Worked examples can be seen below in Table 3. In this table, participant two scored 7, 8, 23, and 23 for the Awareness, Exploration, Commitment and Synthesis phases of the individual developmental branch, respectively. This participant would have been recorded as being in the Synthesis phase of the individual branch (as this participant scored highest in that phase). If participants had tied scores between their highest scored phases, the phase later in development was assigned to the participant. Please refer to Appendix C (page 165) for the SPSS syntax. For example, if participant two in Table 3 scored 23 in the Commitment phase as well as the Synthesis phase, that participant would still be recorded as being in the Synthesis phase because the Synthesis phase is later in development.

Table 3.

Example of the phase of individual and group developmental branch chosen for three participants.

	Participant 1		Participant 2		Participant 3	
	Individual	Group	Individual	Group	Individual	Group
Awareness	8	21	7	17	12	21
Exploration	8	27	8	6	21	16
Commitment	17	20	23	11	13	10
Synthesis	35	35	23	16	11	19
Phase Chosen	Synthesis	Synthesis	Synthesis	Awareness	Exploration	Awareness

The reliability of these measures has varied across studies, ranging from low/weak reliability to acceptable and good reliability (Feldman, 2012; Katz-wise, 2012; Risco, 2008). One study suggested low coefficients can be explained by the multidimensional nature of the phases of sexual identity development (Feldman, 2012). In the current study, in all but one phase the internal consistency was adequate to high. In the male sample, the individual branch ranged from .72 to .85 and the group developmental branch ranged from .63 to .71. In female participants, the individual development branch produced higher internal consistencies than the group developmental branch, ranging from .81 to .89 and .49 to .70, respectively.

Lesbian, Gay, and Bisexual Identity Scale. This measure is a 27 item questionnaire, which assesses eight dimensions found to be important to sexual identity. These include Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, Difficult Process, Identity Superiority, Identity Affirmation, and Identity Centrality (see Appendix B, page 161). These scales were created by computing the average of specific items assigned to each subscale. Item 11 and 23 were reverse scored in these calculations. Items were assigned to each subscale as shown in Table 4.

These dimensions were found to be positively or negatively related to psychological adjustment. Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, and Difficult Process were found to be negatively related to psychological adjustment. In contrast, Identity Affirmation was positively correlated with psychological adjustment (Mohr & Kendra, 2011). Mohr and Kendra did not comment on the relation of Identity Superiority and Identity Centrality to psychological adjustment. The internal consistency of these subscales has ranged from adequate to good across studies (Bregman, Malik, Page, Makynen & Lindahl, 2013; De Oliveira, Lopes, Costa & Nogueira, 2012; Jones, 2014; Zoeterman & Wright, 2014). In the current study, the LGBIS subscales demonstrated an acceptable to excellent internal consistency with Cronbach alpha ranging from .73 to .91.

Table 4.

LGBIS subscales and their associated items.

LGBIS Subscale	Items
Acceptance Concerns	5. I often wonder whether others judge me for my sexual orientation. 9. I can't feel comfortable knowing that others judge me negatively for my sexual orientation. 16. I think a lot about how my sexual orientation affects the way people see me.
Concealment Motivation	1. I prefer to keep my same-sex romantic relationships rather private. 4. I keep careful control over who knows about my same-sex romantic relationships. 19. My sexual orientation is a very personal and private matter.
Identity Uncertainty	3. I'm not totally sure what my sexual orientation is. 8. I keep changing my mind about my sexual orientation. 14. I can't decide whether I am mostly straight, bisexual, gay/lesbian, or another non-straight sexual orientation. 22. I get very confused when I try to figure out my sexual orientation.
Internalized Homonegativity	2. If it were possible, I would choose to be straight. 20. I wish I were straight. 27. I believe it is unfair that I am attracted to people of the same sex.
Difficult Process	12. Admitting to myself that I'm a LGB person has been a very <u>painful</u> process. 17. Admitting to myself that I'm a LGB person has been a very <u>slow</u> process. 23. I have felt comfortable with my sexual identity just about from the start.
Identity Superiority	7. I look down on straight people. 10. I feel that LGB people are superior to straight people. 18. Straight people have boring lives compared with LGB people.
Identity Affirmation	6. I am glad to be an LGB person. 13. I'm proud to be part of the LGB community. 26. I am proud to be LGB.
Identity Centrality	11. My sexual orientation is an <u>insignificant</u> part of who I am. 15. My sexual orientation is a central part of my identity. 21. To understand who I am as a person, you have to know that I'm LGB. 24. Being a LGB person is a very important aspect of my life. 25. I believe being LGB is an important part of me.

Psychological Well-Being. A number of psychological well-being measures will be used in the current study: Affectometer 2, Satisfaction with Life Question, General Happiness question, and PROMIS Emotional Distress—Anger—Short Form. These can be seen in Appendix B, on page 162.

Affectometer 2. The Affectometer 2 is a 40 item assessment of general psychological well-being and happiness. It consists of a list of 20 statements and 20 adjectives. This questionnaire can be shortened by providing participants with either the adjective list or the statement list, with the requirement that there is an equal number of positive and negative items (Kammann & Flett, 1983). This study has chosen to incorporate the 20 adjective item version, where the participants were given a list of 20 adjectives in order to calculate their positive and negative affect. The participants were asked to determine the frequency at which they had felt certain affective states, by the following stem question: “*Over the past few weeks, ... how often do you feel the following...*”. They were provided with a 5 point likert scale, ranging from 0 (*not at all*) to 4 (*all the time*). This measure was scored by subtracting the sum of the negative items from the sum of the positive items (Simmons, 2013). Steel, Schmidt and Shultz (2008) rated this scale as one of the top three measures for overall affect. The psychometric properties of this measure have also been supported. The validity of this measure was supported by the original article and others, which provided evidence for its’ convergent and discriminant validity (Kammann & Flett, 1983; Simmons, 2013). Simmons provided verification of the reliability of the measure, reporting the internal consistency to range between 0.90 and 0.95, and the test-retest reliability was acceptable over a two-week period. In the current study, the internal consistency for positive affect was good (.88), and the internal consistency for negative affect was excellent (.92).

Satisfaction with Life. This is a single, self-report item, which assesses satisfaction with life. The item was as follows: “*Taking all things into consideration, how do you feel about your life as a whole?*”. Participants were asked to rate this question with a 7 point rating scale: Terrible, Unhappy, Mostly Dissatisfied, Mixed (equally satisfied and dissatisfied), Mostly Satisfied, Pleased, and Delighted (Andrews & Withey, 1976).

General Happiness. This is a single, self-report item, which assesses overall happiness over the last few weeks. This was present in the original study of the Affecometer 2, and is worded in the following manner: “*Taking all things together, how happy would you say you have been over the past few weeks?*”. The participants were given a 7 point scale: Very Unhappy, Unhappy, Somewhat Unhappy, Mixed (about equally happy and unhappy), Somewhat Happy, Happy, and Very Happy (Kammann & Flett, 1983).

Rosenberg Self-Esteem Scale. This is a ten item self-report questionnaire, measuring self-esteem. The scale asked participants how strongly they agree with statements regarding to their general feelings about themselves. They were provided with a four point likert scale, ranging from ‘strongly disagree’ to ‘strongly agree’. To score this measure, first, items 2,5,6,8 and 9 must be reverse scored. Second, the items are then added together. Higher calculated scores indicate higher self-esteem (Rosenberg, 1965). This measure has been found to have satisfactory psychometric properties (Sinclair et al, 2010).

PROMIS Emotional Distress—Anger—Short Form. This is a five item scale, which assesses feelings of anger over the past week (developed by the PROMIS Health Organisation and PROMIS Cooperative Group, 2012). Originally this measure was developed for clinical use, where the clinician reads out each statement and offers a 5 point rating scale. In the current study, the following stem statement was provided: “*Please indicate how often have the following symptoms bothered you in the past 7 days*”. The participants were asked to chose from the 5 point scale, ranging from 1 (*Never*) to 5 (*Always*). To score this measure, the developers provided an equation to calculate the total raw score:

$$\text{Total Raw Score} = \frac{(\text{Raw sum} \times \text{number of items on the short form})}{\text{Number of items that were actually answered}}$$

The measure has been normed for individuals aged 18 and over, providing T scores. Despite the inclusion of those who were 16 and over, this measure was deemed appropriate as the research primarily used raw scores for analysis. Pikonis, Choi, Reise, Stover, Riley and Cella (2011) conducted a study on behalf of the PROMIS Cooperative Group, finding support for the psychometric properties of this measure, both in its original and short forms. In addition, the measure was listed in the DSM 5 as an assessment of anger. The Cronbach alpha was .90.

Procedure

Upon ethical consideration, this research project was deemed low risk. Low risk determination is defined as the research providing minimal harm, not exceeding what is experienced in normal daily life. This research was an online survey, which greatly detailed the survey and asked participants not to participate unless they would not be

affected by the material. It also focussed on positive psychology inquiring about well-being rather than mental health. For this reason, the online survey was deemed low risk by peer review (reviewed by the researcher and her supervisor). This, therefore, only required the completion of a Low Risk Notification form and its approval from the Massey University Ethics Committee, as well as the completion of the Screening Questionnaire (3rd October 2014) (URL for the Human Ethics Committee: <http://www.massey.ac.nz/massey/research/research-ethics/human-ethics/human-ethics-committee.cfm>). The information form included the purpose and procedure of the online survey, as well as the contact information of the researcher and the primary supervisor. The letter of ethical approval can be viewed in appendix D (page 168).

Participants were recruited using a number of online methods, primarily through social media (including: Facebook, Twitter, Tumblr, The Asexual Network Forum) and emailing lists (such as the postgraduate psychology graduate list from Massey Universities), as well as other methods, such as word of mouth (i.e. telling people about the survey and where they could access it) and emailing a letter with the survey link to organisations (e.g. Rainbow Youth) and staff at other institutions (e.g. professors or senior lecturers) asking these groups or individuals to distribute the online survey.

The participants were provided with a website address, which contained an information sheet and an invitation to participate. The information sheet presented the participants with an introduction to the research and the researcher. It also included an overview of the survey itself, including the types of questions, eligibility, time taken to complete the survey, information use and storage, participant rights, and contact details for the researcher and research supervisor. In order to minimise any embarrassment or discomfort the information sheet provided examples of the types of questions the participant may be asked. When the participants read the information sheet, consent was asked by the following statement: "*I have read and understood the information sheet for this study and consent to collection of my responses*" (see Appendix E, page 169 for the information sheet).

The survey began by asking participants to describe their demographic details. This included their age, gender, country of birth and current residence, religious beliefs, education, type of area they currently reside, sexual identity, environmental acceptance, and heteronormativity (refer to Appendix B, page 151). All participants were then asked to

complete the ESOI (Epstein Sexual Orientation Inventory). The participants who self-identified as any other sexual identity except ‘straight’ or ‘mostly straight’ were asked to complete three extra questionnaires, consisting of the OI (Outness Inventory), the LIQ (Lesbian Identity Questionnaire) or the GIQ (Gay Identity Questionnaire) – depending on the gender of the participants – and the LGBIS (Lesbian, Gay, Bisexual Identity Scale). The participants who identified their gender as ‘other’ were not asked to complete either of the sexual identity development questionnaires (i.e. LIQ and GIQ) due to the lack of an appropriate measure for individuals with diverse gender identities. Finally, all participants were asked to complete the measures of psychological well-being, comprising of the Affectometer 2, Satisfaction with Life, General Happiness, Rosenberg Self-Esteem Scale, and the PROMIS Emotional Distress—Anger—Short Form. Once completing these questionnaires, the participants were asked where they heard of the research and were provided with the researcher’s email address should they wish to provide comments or feedback. Finally, they were thanked for their participation.

Data Analysis

The analysis was guided by the individual hypothesis and recommendations made by Field (2009). All analyses were conducted within SPSS. Analyses investigating hypotheses utilising the MSO and SOR variables used non-parametric analyses so that the results were comparable to the original article (Esptein et al., 2012). Based on the original articles a Kruskal-Walis was conducted to examine the differences in MSO and SOR between sexual identities. Field (2009) suggests the Exact and Monte Carlo methods of significance testing are more accurate than the default option in SPSS (Asymp.). The utilisation of these methods was dependent on the sample sizes examined. The Exact method is more accurate for small samples, whereas the Monte Carlo method is better for large samples. For this reason, the Exact and Monte Carlo method was used for male and female samples, respectively. To examine pairwise comparisons Mann-Whitney tests were used. Due to the number of pairwise comparisons, a Bonferroni correction was completed as recommended by Field (2009).

While some of the remaining variables violated assumptions for parametric testing, Field (2009) suggested in cases where the sample size is large the likely effect (i.e. the F statistic becoming more conservative) of the violated assumptions is reduced. Therefore, for the remaining hypothesis parametric tests were conducted. In these cases, ANOVA and

ANCOVAs were utilised. Post hoc ANOVA analyses employed Hochberg GT2 or Games-Howell procedures. Field (2009) recommends these methods as they are more accurate when sample sizes between the groups being analysed are different. The Hochberg GT2 was utilised when the homogeneity of variances was not significant. However, according to Field, when the homogeneity of variances was significant the Hochberg GT2 procedure becomes inaccurate, and so in these cases the Games-Howell was conducted. In ANCOVA analyses, Field (2009) recommended the Sidak procedure be utilised instead of the default method, as it is more accurate. The Sidak procedure is less conservative than the Bonferroni method. SPSS produces different types of effect sizes for each of these analyses. However, Field (2009) provided calculations to convert the computed effect size to the r effect size.

Chapter 4: Results

The results chapter is organised as follows. It first presents the procedure followed in order to organise the data. This involved creating additional sexual identity categories and re-coding the countries participants were born and currently reside in. This is followed by the distribution of the participants in terms of their demographic details. Next, there is a presentation of the data analysis. Prior to hypothesis testing, there was an analysis of the differences between the demographic details in terms of the dependent variables within this study. Finally, this chapter systematically explores the research hypotheses.

Data Cleaning

Prior to analysis, some additional sexual identity categories were added to the current seven categories (i.e. heterosexual, mostly heterosexual, bisexual, mostly gay/lesbian, gay/lesbian, other and questioning), as the number of participants who identified as ‘asexual’ or ‘pansexual’ exceeded 50. This is an arbitrary cut off. This sample size cut-off limited the addition of new categories to two.

The countries participants were born in and currently reside in were re-coded through a two-step process. First, the sample size was taken into consideration. For example, a large portion of the sample reported living in New Zealand, and so this country was not combined with any other countries. Countries with fewer participants than 25 were re-coded to combine countries within the same continent and by whether these countries were supportive or non-supportive of individuals with LGBT+ identities. Whether a country was supportive or not supportive was established by investigating the current legal support offered by the countries, such as discrimination laws and marriage equality, and the Pew Global Attitudes on Homosexuality Report (2013). This report assessed the attitudes countries held towards individual with same sex experiences. Some continents were described as only expressing rejecting or supporting attitudes toward same sex experiences. These have therefore been re-coded without stating whether they are supportive or rejecting. For ease of understanding, in the following list of the re-coded countries brackets follow the countries and continents to include their attitude for same sex experiences. In the final re-codes, the 192 country options were re-coded into 16 options: New Zealand (Supportive), Australia (Supportive), United Kingdom (Supportive), United

States of America (Supportive), Canada (Supportive), Sweden (Supportive), Other Nordic Countries (supportive), Supportive Latin America, Non-Supportive Latin America, African Countries (Rejecting), Supportive European Countries, Non-Supportive European Countries, Asian Countries (Rejecting), Pacific Islands (Rejecting), Middle Eastern Countries (Rejecting), and the Philippines (Supportive). Once this was established, another variable was created. This variable has described the difference between the attitudes of the country the participant was born in and the attitudes of country in which they currently reside. For example, if a participant was born in a country which was supportive of same sex partners, yet was living in a country which was not they would be re-coded as 'Supportive to Rejecting'. This variable therefore had four levels: Supportive to Rejecting, as explained above; Rejecting to Supportive, referring to those born in a rejecting environment, yet live in a supportive environment; Unchanged Supportive Attitudes, defined as those born and living in a supportive environment; and Unchanged Rejecting Attitudes, referring to those born and living in a rejecting environment.

Participants

There were 1,661 respondents who had begun the online survey. Of these, 192 were excluded from further analysis as they did not answer vital demographic information, such as their sexual identity, leaving 1,469. Of these, 1,214 reached the final question in the survey. Some participants did not answer some items. In these cases, standard SPSS defaults (list wise deletion) treated these items as missing data. Due to the small number of missing data, no imputation strategies were considered. The complete online survey is presented in Appendix B (page 151).

The final sample consisted of 1019 females, 340 males and 104 identifying as other. The distribution of demographic details can be seen in Table 5. Those who chose 'other' as their gender were asked to specify how they labelled their gender. There were a range of descriptors used, including gender fluid, male-to-female transgender and agender. The age of participants ranged from 16 to 75 and older. The largest age group was those in the 20 – 24 year olds, consisting of a third of the sample. One fifth of the sample was in the 16 – 19 year old age group, and just over one seventh of the sample was 25 – 29 year olds. Close to one third of the sample consisted of participants who were 30 and above. A quarter of the present sample identified as heterosexual, and close to one fifth identified as lesbian/gay. The remaining sample identified as bisexual, mostly heterosexual, asexual

(defined as people with no sexual attraction), mostly gay/lesbian, questioning, pansexual (defined as those who experience attractions for people regardless of their gender identity) and other. A third of participants reported their highest level of education was high school, which was followed by those completing a Bachelor's degree, Diploma/Certificate, Honours/Masters, and PhD. Participants in this research endorsed most commonly being "spiritual but not religious". This was followed by atheism and those who were religious. Of those who were religious, Christianity was the most reported religious affiliation, followed by Other and Islam/Muslim, then Judaism/Jewish and Buddhism. Participants predominantly heard of the research project through Facebook (69.0%). Others reported being alerted to it by another source (13.6%), such as an online forum, emailing list (12.7%), word of mouth (4.1%) and a flyer at a university, or notice board (0.6%).

In place of ethnicity, this research inquired the country of birth and country of residence due to the difficulty of creating a broad coverage of international list of ethnicities. Additionally, the application of country born in and reside in, through the Country Attitudes variable, lends to more meaningful comparisons over ethnicity. The majority of participants were born and currently reside in countries that are supportive of same sex experiences. Only six percent of the sample was born in an environment rejecting of same sex experiences then moved to supportive environments. The remaining participants currently resided in a country that was not supportive of same sex experiences. A large proportion of participants reported they lived in a metropolitan area/ city. The remaining sample of participants was from a village or small town and a rural area.

Table 5.
Distribution of the demographic details.

	N	(%)
Gender		
Male	340	23.2%
Female	1019	69.7%
Other	104	7.1%
Age		
16 – 19 years	317	21.5%
20 – 24 years	491	33.5%
25 – 29 years	211	14.4%
30 – 34 years	113	7.7%
35 – 39 years	76	5.2%
40 – 44 years	55	3.7%

45 – 49 years	43	2.9%
50 – 54 years	68	4.5%
55 – 59 years	50	3.4%
60 – 64 years	21	1.4%
65 – 69 years	11	0.7%
70 years and over	11	0.7%
Sexual Identity Categories		
Heterosexual	370	25.6%
Mostly Heterosexual	181	12.5%
Bisexual	216	15.0%
Mostly Gay/Lesbian	98	6.8%
Lesbian/Gay	264	18.3%
Questioning	70	4.6%
Other	66	4.6%
Pansexual	68	4.7%
Asexual	110	7.6%
Education		
Primary School	15	1.0%
High School	476	33.0%
Diploma/Certificate	291	20.2%
Bachelor's Degree	351	24.3%
Honours/Masters	255	17.7%
PhD	55	3.8%
Religious Belief		
Atheist	584	40.1%
Spiritual but not Religious	685	47.1%
Religious	187	12.8%
Christianity	154	82.8%
Islam/Muslim	10	5.4%
Judaism/Jewish	8	4.3%
Buddhism	4	2.2%
Other	10	5.4%
Country Attitudes		
Supportive to Rejecting	2	0.1%
Rejecting to Supportive	86	5.9%
Unchanged Supportive Attitudes	1332	92.0%
Unchanged Rejecting Attitudes	28	1.9%
Area Living in		
Rural area	90	6.2%
Small town	288	19.9%
Metropolitan area	1066	73.9%

Data Analysis

Demographic Effects

Prior to hypothesis testing, analyses were conducted to investigate whether there were significant differences between the demographic details in terms of the dependent variables in this study. These differences were explored in order to inform further analyses. The descriptive statistics have been represented in Table i and ii in appendix F for further information rather than the body of this text. To explore this, a number of one-way ANOVAs were conducted. The dependent variables were the measures of psychological well-being (positive affect, negative affect, anger, self-esteem, life satisfaction, and general happiness), and identity-related factors (subtests of the Lesbian, Gay, Bisexual Identity Scale, the presumption of heterosexuality, environmental acceptance, acceptance from others, and disclosure).

The one-way ANOVA analyses revealed many significant differences in dependent variables among the demographic variables. However, the majority of these produced small effect sizes (i.e. $r < .300$). These were therefore not controlled for in the remaining analysis. Descriptive statistics may be seen in appendix F, Table i and ii (pages 172 - 175), and inferential statistics can be seen in appendix F, Table iii (page 176). The analysis into differences in negative affect demonstrated moderate effect sizes when compared by age group and education. In further analyses examining negative affect, these variables were therefore controlled for. Age groups also produced a moderate effect size for identity disclosure, and so remaining analyses incorporating identity disclosure controlled for age.

The literature suggests men and women experience sexuality differently, and so males and females were analysed separately in the following analyses (e.g. Fassinger & Miller, 1997). Those who identified their gender as other were not analysed as the sample sizes of sexual identity categories within this gender category were small, preventing reliable analysis.

Sexual Identity Continuum

Hypothesis 1: MSO was predicted to differ by the self-reported sexual identity category

Past research, such as Epstein et al. (2012) and Bejakovich (2013), has demonstrated the sexual identity categories differ in their position on the sexual identity

continuum (as measured by the mean sexual orientation, MSO). The MSO was calculated in a three step process (refer to pages 47-48): first, summing items 1 to 9 for the same sex scale and items 10 to 18 for the opposite sex scale; second, reverse scoring the opposite sex scale by subtracting the opposite sex score from thirteen; and third, averaging the same sex and reverse scored opposite sex scales. For example, a participant with a same sex scale score of 8 and an opposite sex scale score of 13 would have a MSO of 4. Below the calculation for this example has been outlined:

$$\text{MSO} = \text{Step 1: Same sex scale} = 8 \text{ and Opposite sex scale} = 13$$

$$\text{Step 2: Reverse score opposite sex scale: } 13 - 13 = 0$$

$$\text{Step 3: Average scales: } \sum (\text{Same sex scale, Reverse score opposite sex scale})/2$$

$$\text{MSO} = (8 + 0)/2 = 4$$

Based on Epstein et al. and Bejakovich, it was hypothesised there would be significant differences in MSO across the participants identifying in various sexual identities. Specifically, heterosexually identified individuals were predicted to have the lowest MSO and those with gay/lesbian identities were expected to have the highest MSO. The remaining identities were predicted to have significantly different MSOs lying in between those of heterosexual and gay/lesbian identities.

To examine this hypothesis, a Kruskal-Wallis test was conducted placing sexual identity category as the grouping variable and MSO as the test variable. According to the recommendation of Field (2009), a Monte Carlo method (a method of analysing significance applied when using SPSS) was used to calculate significance. This significance test is used when there are large sample sizes, and is more reliable than the default significance test applied by SPSS. MSO was found to significantly differ by sexual identity category for both male and female participants, $H(8) = 275.30, p < .001$ and $H(8) = 748.09, p < .001$, respectively. The descriptive statistics are presented in Table 6. This table demonstrated heterosexually identified individuals scored the lowest MSO and those who have identified as gay/lesbian had the highest computed MSO. The remaining participants fell between these two MSOs; therefore, these results support the hypothesis.

Table 6.

Descriptive statistics of the sexual identity categories in terms of their MSO and SOR.

	MSO			SOR		
	N	M (SD)	95% CI	N	M (SD)	95% CI
Heterosexual						
Male	105	1.30 (1.27)	1.06 - 1.55	105	1.28 (1.91)	0.91 - 1.65
Female	245	2.62 (1.60)	2.42 - 2.83	250	3.56 (2.73)	3.22 - 3.90
Other	1	0.50 (-)	-	1	0.00 (-)	-
Mostly Heterosexual						
Male	27	3.52 (1.39)	2.97 - 4.07	28	6.50 (2.71)	5.45 - 7.55
Female	152	4.40 (1.20)	4.21 - 4.59	153	7.20 (2.49)	6.80 - 7.59
Other	-	-	-	-	-	-
Bisexual						
Male	28	6.02 (1.36)	5.49 - 6.54	29	9.66 (2.24)	8.80 - 10.51
Female	170	6.29 (1.07)	6.13 - 6.45	171	10.11 (1.67)	9.85 - 10.36
Other	12	6.79 (1.10)	6.09 - 7.49	14	8.29 (3.00)	6.55 - 10.02
Mostly Gay/Lesbian						
Male	33	9.29 (1.66)	8.70 - 9.88	33	6.09 (3.27)	4.93 - 7.25
Female	58	8.40 (1.09)	8.11 - 8.68	59	7.92 (2.31)	7.31 - 8.52
Other	5	8.90 (2.16)	6.22 - 11.58	5	5.80 (2.77)	2.35 - 9.25
Lesbian/Gay						
Male	87	10.90 (1.47)	10.58 - 11.21	88	3.56 (2.82)	2.96 - 4.15
Female	161	10.35 (1.37)	10.14 - 10.57	163	4.40 (2.49)	4.01 - 4.78
Other	11	10.68 (1.27)	9.83 - 11.54	11	3.82 (2.48)	2.15 - 5.49
Questioning						
Male	7	5.21 (2.21)	3.17 - 7.26	7	8.00 (4.16)	4.15 - 11.85
Female	55	5.82 (1.75)	5.35 - 6.29	58	7.00 (3.42)	6.10 - 7.90
Other	5	5.80 (1.89)	3.45 - 8.15	5	5.20 (1.64)	3.16 - 7.24
Other						
Male	13	5.58 (3.18)	3.65 - 7.50	14	4.93 (4.53)	2.31 - 7.54
Female	37	6.91 (2.23)	6.16 - 7.65	37	6.84 (3.78)	5.58 - 8.10
Other	14	7.50 (2.44)	6.09 - 8.91	14	6.29 (3.31)	4.37 - 8.20
Pansexual						
Male	13	6.38 (1.16)	5.69 - 7.08	13	10.08 (1.50)	9.17 - 10.98
Female	39	6.40 (1.12)	6.03 - 6.76	39	9.85 (2.10)	9.17 - 10.53
Other	13	6.96 (0.85)	6.45 - 7.48	15	9.67 (2.41)	8.33 - 11.00
Asexual						
Male	14	5.54 (1.99)	4.39 - 6.68	14	1.36 (1.39)	0.55 - 2.16
Female	58	6.03 (1.18)	5.71 - 6.34	59	2.12 (2.23)	1.54 - 2.70
Other	36	6.51 (1.21)	6.10 - 6.92	36	2.22 (2.32)	1.44 - 3.01

Mann-Whitney tests were used to follow-up on the pairwise comparisons. These incorporated the Monte Carlo and Exact method to calculate significance. For pairwise comparisons in male participants where the sample sizes were below 30, the Exact test of significance was used. The Exact method is a more accurate measure of significance in

smaller samples. The Monte Carlo method (as described above) was used for female participants due to the large sample size (Field, 2009). A Bonferroni correction (i.e. the application of an adjusted p value taking into account the number of pairwise comparisons) was applied for the following comparisons. All effects are reported at a .0014 significance level (because the Bonferroni correction is calculated by dividing the original p value by the number of pairwise comparisons – i.e. $.05/36 = .0014$). This was a very critical significance level and it was likely to affect which findings were deemed significant. Therefore, moderate or large effect sizes may be found even in cases where the finding was deemed non-significant. Effect sizes were computed for all Mann-Whitney pairwise comparisons by using the following calculation: $r = Z \text{ score}/\sqrt{\text{sample size}}$

Table 7.
Effect sizes computed from Mann-Whitney tests for the pairwise comparisons between the sexual identity categories in terms of their MSO.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
Male Participants									
1. Heterosexual	-								
2. Mostly Heterosexual	-0.52*	-							
3. Bisexual	-0.68*	-0.73*	-						
4. Mostly Gay	-0.74*	-0.86*	-0.77*	-					
5. Gay	-0.86*	-0.74*	-0.71*	-0.42*	-				
6. Questioning	-0.37*	-0.33	-0.02	-0.62*	-0.44*	-			
7. Other	-0.44*	-0.30	-0.06	-0.53*	-0.50*	-0.02	-		
8. Pansexual	-0.53*	-0.72*	-0.27	-0.70*	-0.56*	-0.12	-0.18	-	
9. Asexual	-0.51*	-0.53*	-0.07	-0.71*	-0.58*	-0.02	-0.02	-0.28	-
	1.	2.	3.	4.	5.	6.	7.	8.	9.
Female Participants									
1. Heterosexual	-								
2. Mostly Heterosexual	-0.55*	-							
3. Bisexual	-0.78*	-0.68*	-						
4. Mostly Lesbian	-0.68*	-0.76*	-0.63*	-					
5. Lesbian	-0.85*	-0.86*	-0.84*	-0.57*	-				
6. Questioning	-0.54*	-0.40*	-0.12	-0.69*	-0.72*	-			
7. Other	-0.51*	-0.46*	-0.15	-0.38*	-0.55*	-0.26	-		
8. Pansexual	-0.55*	-0.55*	-0.07	-0.71*	-0.66*	-0.19	-0.16	-	
9. Asexual	-0.60*	-0.53*	-0.07	-0.75*	-0.75*	-0.06	-0.24	-0.16	-

Note: * $p < .0014$ (Bonferroni corrected significance level)

Table 7 demonstrated many significant pairwise comparisons. In all comparisons, heterosexually identified participants had significantly lower MSO than other sexual identities. Additionally, those identifying as gay/lesbian reported significantly higher MSO in all pairwise comparisons. Participants identifying as mostly heterosexual or mostly gay/lesbian also had significantly different MSO in almost all pairwise comparisons. Identities in the centre of the continuum (i.e. bisexual, questioning, other, pansexual and asexual) did not significantly differ by MSO in pairwise comparisons. Refer to Figure 7 for the placement of sexual identities on the continuum. These results partially support hypothesis one since participants identifying as heterosexual, mostly heterosexual, mostly gay/lesbian and gay/lesbian were all significantly different in terms of their MSO. Those whose self-reported identities fell in the centre of the continuum, however, did not differ significantly from one another.

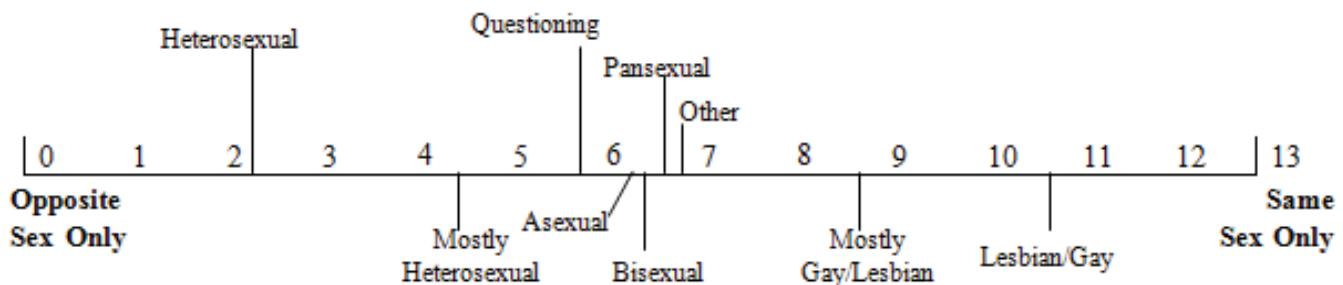


Figure 7. Placement by MSO of the self-reported sexual identities along the sexual identity continuum.

Hypothesis 2: SOR was hypothesised to differ by self-reported sexual identity category

According to past literature, people with differing self-reported sexual identities also differ in sexual flexibility (as measured by the sexual orientation range, SOR, in Epstein et al. (2012) and Bejakovich (2013)). People with different sexual identities were therefore expected to vary in regard to their SOR. More specifically, heterosexual and gay/lesbian identities were predicted to have the lowest SOR, whereas bisexual and asexually identified individuals were hypothesised to have the highest SOR. The remaining identities were thought to lie somewhere in between. The SOR was computed as described in Epstein and Robertson (2014), whereby the lesser value of same and opposite sex scales was assigned as the SOR. In the previous example, the person would have a SOR of 8. See below the manner in which this was deduced:

SOR = Lesser Value: Same sex scale = 8 and Opposite sex scale = 13

= 8

A Kruskal-Wallis analysis demonstrated a significant finding for both male and female participants, where SOR was placed as the test variable and sexual identities was placed as the grouping variable, $H(8) = 172.70, p < .001$ and $H(8) = 523.17, p < .001$, respectively. The descriptive statistics can be seen in Table 6. These descriptive statistics demonstrate mixed support for the hypothesis. The results demonstrate heterosexually identified men and asexually identified participants were found to have the smallest SOR. Bisexually identified participants reported the highest MSO; however, their MSO did not significantly differ to pansexually identified participants. This partially supported the hypothesised order of the SOR of sexual identities.

As above, to follow-up on the significant Kruskal-Wallis findings, a series of Mann-Whitney tests were used to make pairwise comparisons. The Monte Carlo and Exact significance calculations were utilised for sample sizes above and below 30, respectively. A Bonferroni correction was applied to these findings, and so all effects are reported at a .0014 significance level. As with MSO findings, non-significant findings that have produced moderate to large effect sizes have been mentioned below. The effect sizes have been presented in Table 8 (and the significant effect sizes were highlighted with an asterisk).

Table 8 demonstrated most differences between sexual identities were found to be significant; therefore, partially supporting the hypothesis. The order of lowest to highest SOR, however, was not entirely as hypothesised. It was predicted heterosexual and gay/lesbian identities would have the lowest SOR, and bisexual identified individuals would have the highest SOR. The remaining identities were expected to have SORs between these sexual identities. Consistent with this hypothesis (seen in Table 6), heterosexually identified men reported the smallest SOR. Inconsistent with the hypothesis, however, this was similar to asexually identified men and women. Next were heterosexually identified women then those identifying as lesbian. Bisexual- and pansexually- identified participants scored the highest SOR, although did not differ significantly from each other. The remaining sexual identities scored SORs between participants identifying as lesbian/gay and bisexual identities. Thus, partially supporting the hypothesis.

Table 8.

Effect sizes computed from Mann-Whitney tests for the pairwise comparisons between the sexual identity categories in terms of their SOR.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
Male Participants									
1. Heterosexual	-								
2. Mostly Heterosexual	-0.63*	-							
3. Bisexual	-0.73*	-0.58*	-						
4. Mostly Gay	-0.60*	-0.02	-0.57*	-					
5. Gay	-0.46*	-0.41*	-0.66*	-0.34*	-				
6. Questioning	-0.39*	-0.23	-0.12	-0.25	-0.28	-			
7. Other	-0.28*	-0.18	-0.48	-0.13	-0.08	-0.31	-		
8. Pansexual	-0.58*	-0.63*	-0.05	-0.58*	-0.54*	-0.17	-0.56	-	
9. Asexual	-0.10	-0.69*	-0.80*	-0.61*	-0.29	-0.67*	-0.33	-0.86*	-
	1.	2.	3.	4.	5.	6.	7.	8.	9.
Female Participants									
1. Heterosexual	-								
2. Mostly Heterosexual	-0.56*	-							
3. Bisexual	-0.80*	-0.60*	-						
4. Mostly Lesbian	-0.52*	-0.12	-0.44*	-					
5. Lesbian	-0.16*	-0.50*	-0.80*	-0.53*	-				
6. Questioning	-0.38*	-0.01	-0.44*	-0.11	-0.36*	-			
7. Other	-0.29*	0.00	-0.36*	-0.10	-0.27*	-0.01	-		
8. Pansexual	-0.54*	-0.41*	-0.03	-0.40*	-0.61*	-0.43*	-0.41*	-	
9. Asexual	-0.22*	-0.65*	-0.75*	-0.78*	-0.41*	-0.63*	-0.58*	-0.82*	-

Note: * $p < .0014$ (Bonferroni corrected significance level)

Sexual Identity and Identity-Specific Dimensions

Hypothesis 3: Self-reported sexual identities were expected to differ in terms of their identity uncertainty, internalised homonegativity and identity disclosure

Minority stress theory suggests minority sexual identities, such as gay/lesbian, may experience common identity-specific stressors, such as internalised homonegativity. However, the degree these identity-specific stressors are experienced is thought to vary between people with different sexual identities. This has been demonstrated with certain LGBQ+ identity stressors, including internalised homonegativity, identity uncertainty and

identity disclosure (e.g. Barker et al., 2012; Sarno & Wright, 2013). Based on this research, it was hypothesised non-binary identities (i.e. mostly heterosexual, bisexual, mostly gay/lesbian, questioning, and other) would have higher levels of Identity Uncertainty and Internalised Homonegativity and lower levels of Identity Disclosure.

Male and female participants were analysed separately. Participants identifying their gender as ‘Other’ were not analysed, as the sample sizes of the self-reported identities were small. The assumptions of normality and homogeneity of variances in some cases were violated. This can cause the F statistic to become more conservative in times when the samples are skewed, and so statistically significant results were less likely to be found. Due to the sample size of this study, this was unlikely to be an issue (Field, 2009). Thus, the hypothesis was analysed by a series of ANOVAs and an ANCOVA. For each ANOVA, the sexual identity category was placed as the fixed factor and the identity-specific stressors (i.e. internalised homonegativity, and identity uncertainty) were placed as the dependent variable. Post hoc analysis was conducted using a Games-Howell procedure. This procedure was chosen as sample sizes between categories are not equal, and the population variances significantly differed. Given these circumstances, the Games-Howell procedure is the most reliable post hoc procedure (Field, 2009). Effect sizes have been reported by r as described by Field (2009) and for consistency of reported effect size throughout this thesis. Effect sizes (r) were computed for all ANOVA by the following calculation:

$$r = \sqrt{(\text{sum of squares between groups} / \text{sum of squares total})}$$

An ANCOVA was used to examine differences in identity disclosure (dependent variable) between self-reported sexual identity (fixed factor), while controlling for age (covariate). Main effects were compared using the Sidak test, as it is more accurate than LSD pairwise comparisons, yet has more power than the Bonferroni test. An ANCOVA produces partial eta squared as the effect size. This was converted to r by equation mentioned in Field (2009) which involves square rooting the partial eta squared.

Table 9.
Descriptive statistics of the sexual identity categories in terms of their scores on the LGBIS subscales Identity Uncertainty, Internalised Homonegativity, and Identity Disclosure.

	Male				Female				F Statistic	Effect Size	Effect Size
	N	M (SD)	95% CI	F Statistic	Effect Size	N	M (SD)	95% CI			
Identity Uncertainty				20.80***	0.69				40.57***	0.60	
Bisexual	24	3.24 (1.67)	2.53 – 3.95			131	3. 04 (1.65)	2.75 – 3.32			
Mostly Gay/Lesbian	25	2.86 (1.52)	2.23 – 3.49			48	3.44 (1.46)	3.01 – 3.86			
Lesbian/Gay	65	1.33 (.57)	1.19 – 1.47			131	1.64 (.94)	1.48 – 1.81			
Questioning	5	6.25 (.83)	5.22 – 7.28			39	5.56 (1.40)	5.10 – 6.01			
Other	10	2.48 (1.25)	1.58 – 3.37			28	2. 84 (1.70)	2.18 – 3.50			
Pansexual	9	3.36 (1.57)	2.15 – 4.57			33	3.08 (1.83)	2.43 – 3.73			
Asexual	9	2.54 (1.69)	1.23 – 3.83			38	2.48 (1.52)	1.98 – 2.98			
Internalised Homonegativity				3.36***	0.35				2.78*	0.19	
Bisexual	25	2.53 (1.58)	1.88 – 3.18			133	2.15 (1.43)	1.90 – 2.39			
Mostly Gay/Lesbian	25	3.19 (1.82)	2.44 – 3.94			49	2.39 (1.60)	1.93 – 2.86			
Lesbian/Gay	65	2.07 (1.38)	1.73 – 2.41			133	2.15 (1.51)	1.89 – 2.40			
Questioning	5	4.00 (1.65)	1.95 – 6.05			36	2.88 (1.66)	2.32 – 3.44			
Other	10	2.40 (1.76)	1.14 – 3.66			28	1.90 (1.25)	1.41 – 2.39			
Pansexual	9	2.15 (1.29)	1.15 – 3.14			33	1.61 (.81)	1.32 – 1.89			
Asexual	8	1.33 (.44)	0.97 – 1.70			35	2.37 (1.24)	1.95 – 2.80			
Identity Disclosure				4.38***	0.37				6.61***	0.26	
Bisexual	27	2.24 (1.02)	1.83 – 2.64			162	3.34 (1.40)	3.13 – 3.56			
Mostly Gay/Lesbian	31	3.68 (1.62)	2.08 – 4.27			56	4.51 (1.42)	4.13 – 4.88			
Lesbian/Gay	81	4.75 (1.38)	4.44 – 5.05			151	4.55 (1.42)	4.32 – 4.79			
Questioning	7	1.63 (.71)	0.97 – 2.29			50	2.13 (1.40)	1.73 – 2.53			
Other	13	4.43 (2.12)	3.15 – 5.71			37	3.68 (1.86)	3.06 – 4.29			
Pansexual	11	3.89 (1.12)	3.14 – 4.64			38	3.58 (1.39)	3.12 – 4.04			
Asexual	12	2.57 (1.13)	1.85 – 3.30			57	2.52 (1.28)	2.18 – 2.86			

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

The results were presented in Table 9. These results demonstrate a significant difference in Identity Uncertainty, Internalised Homonegativity, and Identity Disclosure between sexual identity categories. In the male sample, these results produced large, moderate and moderate effect sizes, respectfully. The effect sizes in the female sample were large, small and small for Identity Uncertainty, Internalised Homonegativity, and Identity disclosure, respectively. Post hoc analysis found participants identifying as gay/lesbian were significantly more certain of their sexual identity than all other sexual identities, whereas those with questioning identities were less certain than all other sexual identities. Additionally, post hoc analysis revealed lesbian and gay men have disclosed their identity more than those identifying as bisexual, asexual and questioning. Gay men have also disclosed to more people than men identified as mostly gay. Post hoc analysis found no significant pairwise comparisons in Internalised Homonegativity, with few exceptions. These exceptions include: men identifying as asexual reported lower Internalised Homonegativity when compared to bisexual, mostly gay, and gay men; and pansexually identified women reported lower Internalised Homonegativity than questioning women.

Hypothesis 4: Self-reported sexual identities were predicted to differ in regards to the remaining identity-specific dimensions

The remaining identity-specific stressors have not been investigated to the same extent, and so it was difficult to make a specific hypothesis on each variable. Instead, an exploratory hypothesis was formed. Self-reported sexual identities were expected to differ by each of the identity-specific dimensions. More specifically, non-binary identities were predicted to experience more Acceptance Concerns, Concealment Motivation, Difficult Process and the Presumption of Heterosexuality, and less Identity Superiority, Identity Centrality and Identity Affirmation. To assess this hypothesis the same method of statistical analysis as for Hypothesis 3 was conducted. That is, a series of ANOVAs were utilised, whereby the fixed factor was self-reported identity and the dependent variable was the identity-related dimension. Furthermore, the post hoc analytic procedure employed to examine the differences between sexual identities was either the Gabriel Hochberg's GT2 or the Games-Howell procedure, depending on whether or not the population variances significantly differed. The Gabriel Hochberg's GT2 procedure is a statistical procedure recommended by Field (2009) to analyse pairwise comparisons for samples of different sizes that have equal variances. The effect sizes were computed using the above calculation.

Table 10.

Descriptive statistics of the sexual identity categories in terms of their scores on the LGBIS subscales Acceptance Concerns, Concealment Motivation, Difficult Process, Identity Superiority, Identity Affirmation, and Identity Centrality.

		Bisexual		Mostly Gay/lesbian		Gay/lesbian		Questioning		Other		Pansexual		Asexual	
		N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)
Acceptance Concerns															
Male ^a *	Male	23	4.16 (1.75)	25	4.32 (1.81)	65	3.74 (1.57)	5	5.00 (1.47)	9	2.63 (1.26)	9	4.74 (1.19)	8	3.88 (1.33)
	Female	131	3.80 (1.63)	49	4.34 (1.58)	133	4.42 (1.51)	38	4.68 (1.46)	28	3.76 (1.54)	33	4.17 (1.49)	37	4.01 (1.54)
Concealment Motivation		25	5.32 (1.34)	25	4.16 (1.81)	64	3.24 (1.41)	5	6.00 (.94)	10	3.10 (1.70)	9	4.44 (1.32)	7	3.95 (1.66)
Female ^a **	Male	132	4.08 (1.68)	49	3.82 (1.53)	133	3.75 (1.60)	37	4.97 (1.40)	28	3.88 (1.77)	33	3.66 (1.72)	36	4.29 (1.52)
	Female	117	3.53 (1.49)	49	3.86 (1.68)	110	4.31 (1.56)	36	4.17 (1.22)	25	3.57 (1.47)	29	3.48 (1.55)	32	3.79 (1.17)
Identity Superiority		24	2.19 (1.36)	25	2.32 (1.40)	65	2.27 (1.35)	5	1.67 (.78)	10	2.63 (1.34)	9	1.93 (1.02)	8	1.83 (1.01)
Female ^b **	Male	130	1.85 (1.05)	49	2.00 (.98)	131	2.32 (1.26)	38	2.09 (1.13)	28	2.14 (1.28)	33	2.12 (1.38)	39	1.54 (.81)
	Female	119	3.89 (1.21)	46	4.33 (1.30)	119	4.89 (1.16)	33	3.63 (.88)	26	3.87 (1.57)	28	4.29 (1.53)	37	4.11 (1.34)
Identity Affirmation		24	4.88 (1.15)	25	4.48 (1.74)	65	5.88 (1.21)	5	4.13 (.38)	10	5.73 (1.80)	9	5.44 (.87)	9	4.74 (1.02)
Female ^a ***	Male	131	5.16 (1.32)	47	5.52 (1.11)	132	5.90 (1.19)	37	4.92 (1.24)	28	5.27 (1.17)	33	5.87 (1.04)	38	4.69 (1.56)
	Female	119	3.63 (1.42)	46	4.33 (1.30)	119	4.89 (1.16)	33	3.63 (.88)	26	3.87 (1.57)	28	4.29 (1.53)	37	4.11 (1.34)

Note: a = Gabriel Hochberg's GT2 procedure; b = Games-Howell procedure

* $p < .05$; ** $p < .01$ *** $p < .001$

Table 10 has presented the descriptive statistics for LGBIS scales and has indicated significant findings and the type of post hoc analytic procedure. This Table demonstrated significant differences found in male and female participants in the following LGBIS subscales: Acceptance Concerns (female, $F(6, 448) = 2.98, p = .007, r = 0.20$; and male, $F(6, 143) = 2.23, p = .043, r = 0.30$), Concealment Motivation (female, $F(6, 448) = 3.93, p = .003, r = 0.21$; and male, $F(6, 144) = 8.28, p < .001, r = 0.51$), Identity Affirmation (female, $F(6, 445) = 8.08, p < .001, r = 0.32$; and male, $F(6, 146) = 5.31, p < .001, r = 0.43$), and Identity Centrality (female, $F(6, 407) = 8.82, p < .001, r = 0.34$; and male, $F(6, 145) = 3.65, p = .002, r = 0.39$). Male participants did not significantly differ in the levels of the LGBIS subscales Difficult Process ($F(6, 120) = 1.05, p = .397, r = 0.23$) and Identity Superiority ($F(6, 145) = 0.55, p = .773, r = 0.15$), whereas these significantly differed in female participants ($F(6, 447) = 3.30, p = .003, r = 0.21$ and $F(6, 391) = 3.34, p = .003, r = 0.22$, respectively).

Post hoc analysis in male participants found few significant pairwise comparisons. Men identifying as gay reported higher levels of Identity Affirmation and lower levels of Concealment Motivation when compared to non-binary identities (i.e. bisexual, mostly gay and questioning). In female participants, women identifying as lesbian reported higher levels of Difficult Process, Identity Superiority, Identity Affirmation, and Identity Centrality than those with non-binary identity. Questioning women reported higher levels of Concealment Motivation than mostly lesbian, lesbian and pansexual, and reported higher levels of Acceptance Concerns than bisexual identities. Surprisingly, women with lesbian identities report more Acceptance Concerns than bisexual identities.

Table 11 has depicted descriptive and inferential statistics for the ANOVA results regarding differences in the presumption of heterosexuality demonstrated significant differences between self-reported sexual identities. In male participants, post hoc analysis revealed those identifying as heterosexual reported higher levels of Presumption of Heterosexuality than all other identities, except men who identified as bisexual, questioning and asexual. Post hoc analysis demonstrated female participants who identified as heterosexual reported higher levels than all identities, except mostly heterosexual, questioning and asexual identities. Additionally, lesbian identities had lower levels of this presumption than those identifying as mostly heterosexual, bisexual, questioning and asexual.

Table 11.

Descriptive statistics of the sexual identity categories in terms of their Presumption of Heterosexuality.

Presumption of Heterosexuality					
	N	M (SD)	95% CI	F Statistic	Effect Size
Male Participants				13.06***	0.49
Heterosexual	106	4.48 (.61)	4.36 – 4.59		
Mostly Heterosexual	28	3.88 (.90)	3.53 – 4.22		
Bisexual	29	4.03 (.74)	3.75 – 4.31		
Mostly Gay/Lesbian	33	3.52 (1.07)	3.14 – 3.90		
Lesbian/Gay	89	3.38 (.92)	3.19 – 3.58		
Questioning	7	4.21 (.57)	3.69 – 4.74		
Other	14	3.43 (.78)	2.98 – 3.88		
Pansexual	13	3.54 (.72)	3.10 – 3.97		
Asexual	14	3.86 (.99)	3.29 – 4.43		
Female Participants				15.34**	0.33
Heterosexual	252	4.65 (.56)	4.48 – 4.72		
Mostly Heterosexual	153	4.48 (.65)	4.38 – 4.58		
Bisexual	170	4.27 (.77)	4.16 – 4.39		
Mostly Gay/Lesbian	59	4.15 (.70)	3.97 – 4.33		
Lesbian/Gay	163	3.91 (.95)	3.76 – 4.06		
Questioning	58	4.37 (.74)	4.18 – 4.57		
Other	37	4.07 (.72)	3.83 – 4.31		
Pansexual	39	4.14 (.65)	3.93 – 4.35		
Asexual	60	4.36 (.69)	4.18 – 4.54		

Note: *p < .05; **p < .01 ***p < .001

Sexual Identity, Continuum and Psychological Well-Being

Hypothesis 5: Self-reported sexual identities were hypothesised to differ in levels of psychological well-being

Mental health literature revealed people with LGBQ+ identities have reported higher rates of mental health disorders (e.g. Bostwick et al., 2010). When researchers began exploring the disparities in psychological well-being between heterosexually identified individuals and those with LGBQ+ identities, they found similar results (e.g. Becker et al., 2014). Studies investigating the differences between sexual minority identities (i.e. gay versus bisexual versus questioning) have typically found non-binary identities to report lower levels of psychological well-being (e.g. Jorm et al., 2002). Based

on this literature, participants with non-binary identities (i.e. bisexual, questioning or other) were hypothesised to report lower levels of positive affect, self-esteem, general happiness and life satisfaction, and higher levels of anger and negative affect when compared to lesbian/gay participants. Additionally, heterosexually identified participants were predicted to have higher levels of psychological well-being than participants of all other sexual identities did.

In order to test this hypothesis, this study conducted a series of ANOVAs. Male and female participants were, once again, analysed separately. The descriptive statistics have been presented in Table 12. For each ANOVA, the sexual identity category was a fixed factor and the psychological well-being variable was placed as the dependent variable (i.e. positive and negative affect, anger, self-esteem, life satisfaction and general happiness). Post hoc analyses of ANOVA results utilised the Hochberg's GT2 and Games-Howell procedure to calculate significance due to the recommendations made by Field (2009). Age and education had a moderate effect on negative affect, and so an ANCOVA was used to control for these effects. As recommended by Field (2009) post hoc analysis for this ANCOVA used the Sidak procedure.

This series of ANOVA analyses demonstrated significant differences in male and female participants between self-reported sexual identity in terms of: Positive Affect (male, $F(8, 273) = 2.57, p = .01, r = .27$; and female, $F(8, 829) = 4.82, p < .001, r = .21$); Negative Affect (male, $F(8, 277) = 3.20, p = .002, r = .30$; and female, $F(8, 832) = 3.33, p = .001, r = .18$); Life Satisfaction (male, $F(8, 277) = 2.64, p = .009, r = .27$; and female, $F(8, 849) = 3.18, p = .001, r = .17$); and General Happiness (male, $F(8, 277) = 2.43, p = .015, r = .26$; and female, $F(8, 848) = 3.52, p = .002, r = .18$). Anger was not found to be significant in men ($F(8, 272) = 1.29, p = .252, r = .19$), yet women identifying with different identities appeared to have significantly different levels of anger ($F(8, 842) = 4.26, p < .001, r = .20$). Additionally, male participants did not significantly differ in self-esteem, ($F(8, 271) = 1.46, p = .174, r = .21$), whereas female participants significantly differed in self-esteem between sexual identities, $F(8, 830) = 3.27, p = .001, r = .18$. These results, therefore, partially support the hypothesis that self-reported identities would differ in terms of their psychological well-being.

Table 12.

Descriptive statistics of the sexual identity categories in terms of their psychological well-being variables.

		Positive Affect		Negative Affect		Anger		Self-Esteem		Life Satisfaction		General Happiness	
		N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)	N	M (SD)
Heterosexual													
Male	101	36.76 (5.09)	102	21.73 (6.72)	100	12.47 (3.89)	101	26.37 (2.58)	103	5.39 (1.01)	103	5.50 (1.18)	
Female	234	36.37 (5.94)	234	22.97 (7.16)	237	13.18 (4.17)	233	26.36 (2.31)	238	5.28 (1.23)	238	5.32 (1.36)	
Mostly Heterosexual													
Male	25	35.12 (6.10)	26	24.31 (7.14)	26	12.58 (4.14)	26	26.65 (2.06)	26	4.96 (1.28)	26	5.38 (1.33)	
Female	146	34.17 (5.95)	147	25.68 (7.72)	149	14.50 (4.45)	149	26.89 (2.26)	149	4.95 (1.27)	149	4.99 (1.48)	
Bisexual													
Male	25	33.40 (6.78)	25	29.48 (9.93)	25	14.64 (4.12)	25	26.76 (2.35)	25	4.88 (1.42)	25	4.76 (1.48)	
Female	132	33.33 (7.42)	133	26.84 (8.37)	133	14.89 (4.36)	132	27.22 (2.37)	136	4.75 (1.45)	136	4.75 (1.59)	
Mostly Gay/Lesbian													
Male	26	33.42 (5.91)	26	28.04 (9.51)	26	14.54 (5.05)	25	26.48 (3.98)	26	4.58 (1.42)	26	4.58 (1.86)	
Female	48	34.52 (7.48)	46	26.00 (8.60)	48	13.91 (3.64)	48	26.92 (1.94)	49	4.95 (1.44)	49	4.86 (1.65)	
Lesbian/Gay													
Male	64	35.83 (6.56)	65	23.75 (8.38)	63	13.13 (4.36)	62	26.73 (2.67)	65	4.95 (1.20)	65	5.14 (1.42)	
Female	130	34.87 (7.00)	130	24.25 (8.29)	134	13.52 (4.19)	131	27.51 (2.70)	134	5.14 (1.26)	134	5.12 (1.51)	
Questioning													
Male	5	26.60 (4.16)	5	30.00 (9.00)	5	14.00 (5.61)	5	29.00 (1.41)	5	4.20 (1.10)	5	4.20 (.84)	
Female	38	31.82 (7.23)	38	30.32 (10.28)	39	15.26 (4.55)	39	27.44 (2.81)	40	4.58 (1.48)	40	4.35 (1.67)	
Other													
Male	10	35.60 (8.68)	10	26.30 (6.60)	10	11.40 (5.04)	10	28.10 (3.07)	10	4.70 (1.64)	10	4.50 (2.12)	
Female	29	33.79 (7.87)	28	26.21 (8.01)	28	13.21 (4.57)	29	27.14 (2.45)	29	4.59 (1.70)	29	4.97 (1.59)	
Pansexual													
Male	9	33.78 (5.19)	9	27.00 (9.59)	9	13.33 (4.69)	8	28.50 (2.51)	9	5.33 (1.32)	9	5.67 (1.00)	
Female	31	32.02 (6.89)	32	30.91 (9.37)	32	16.41 (4.63)	29	27.52 (2.13)	32	4.81 (1.33)	32	4.41 (1.62)	
Asexual													
Male	9	36.33 (7.19)	9	23.67 (4.63)	9	12.89 (6.05)	9	26.67 (2.45)	9	5.89 (1.05)	9	4.78 (1.79)	
Female	42	32.36 (6.48)	44	26.39 (7.58)	43	13.14 (4.43)	41	26.98 (2.89)	43	4.79 (1.41)	42	4.98 (1.49)	

Post hoc analysis of ANOVA results in male participants predominantly utilised the Hochberg GT2 procedure, with an exception when analysing the pairwise comparisons in General Happiness where the Games-Howell was implemented. These results demonstrated the majority of pairwise comparisons were not found to be significant. Positive affect, however, was found to be significantly higher in men identifying as heterosexual and gay when compared to those identifying as questioning.

In female participants, post hoc analysis of pairwise comparisons of positive affect and life satisfaction implemented the Games-Howell procedure. Post hoc analysis of anger, self-esteem and general happiness utilised the Hochberg GT2 procedure. The main significant findings was women who identified as heterosexual reported significantly higher levels of positive affect, life satisfaction, and general happiness, and significantly lower levels of anger when compared to some non-binary identities. More specifically, Heterosexually identified women reported higher positive affect, life satisfaction and general happiness, and lower negative affect and anger when compared to women identifying as bisexual. Those identifying as heterosexual also reported higher positive affect than women identifying as mostly heterosexual, questioning, pansexual and asexual, as well as reporting more general happiness than those identified as questioning and pansexual, and lower levels of anger than those identifying as pansexual. Surprisingly, women who identified as lesbian or bisexual reported significantly higher levels of self-esteem than heterosexual women. Additionally, pairwise comparisons revealed lesbian and asexual females report lower levels of anger than the pansexually identified females.

In both male and female participants, post hoc analyses of pairwise comparisons of negative affect were examined using the Sidak procedure. This revealed heterosexual identities reported lower levels of negative affect when compared to bisexual identities. These post hoc analyses provide partial support for the hypotheses as they demonstrate some non-binary identities report lower levels of psychological well-being when compared to heterosexual and gay identities. However, heterosexually identified participants did not demonstrate higher levels of well-being when compared to gay/lesbian participants.

Hypothesis 6: Same sex experiences and SOR are expected to be associated with psychological well-being

Individuals with same sex experiences, regardless of self-reported sexual identity, have been found to have lower levels of psychological well-being (Jager & Davis-Kean,

2011). Due to this finding, it was predicted same sex experiences (i.e. attractions, fantasies and behaviours) would be associated with the lower levels of psychological well-being (i.e. lower levels of positive affect, self-esteem, life satisfaction, and general happiness, and higher levels of anger and negative affect). Additionally, research suggests non-binaries identities report lower levels of well-being. Therefore, the higher the range of sexual experiences (i.e. higher SOR) was predicted to be associated with lower well-being.

To investigate these hypotheses, Spearman's rho correlations were conducted between the variable of same sex experience and variable of psychological well-being. The results have been presented in Table 13. This table demonstrated few significant correlations, providing little evidence for the hypothesis. The analysis in male participants revealed only two significant findings: the correlations between same sex attractions and life satisfaction; and the correlation between same sex fantasies and life satisfaction. These correlations suggest the higher degree of same sex attractions and fantasies reported by male participants, the less life satisfaction they endorsed. In female participants, there was a significant relationship between anger and all same sex experiences and SOR. That is, as female participants reported more same sex attractions, fantasies, and behaviours, and sexual flexibility they also reported higher levels of anger.

Prior to examining the association between negative affect and the same sex variables, an analysis of demographic differences found education and age have a significant moderate effect size on negative affect. For this reason, these variables were controlled for using a partial correlation between negative affect and the variables of same sex experiences and SOR. In both men and women, the analysis between negative affect and SOR, same sex attractions and fantasies revealed a significant positive relationship (SOR: $r = .160, p = .008$ and $r = .127, p < .001$, respectively; attractions: $r = .181, p = .003$ and $r = .114, p < .001$, respectively; fantasies: $r = .183, p = .002$ and $r = .122, p < .001$, respectively). That is, higher levels of SOR, same sex attractions and fantasies were associated with higher levels of negative affect. The correlations between same sex behaviour and negative affect were not significant for either male or female participants ($r = .114, p = .059$ and $r = .049, p = .157$, respectively). Thus, this provides partial support for the hypothesis.

Table 13.

Spearman's rho correlations between the same sex experiences and SOR and the psychological well-being variables of male and female participants.

	Same Sex Attractions	Same Sex Fantasies	Same Sex Behaviours	SOR
Male Participants				
Positive Affect	-.09	-.07	-.01	-.11
Anger	.07	.09	.08	.10
Self-Esteem	-.03	-.01	-.01	.02
Life Satisfaction	-.16**	-.12*	-.08	-.08
General Happiness	-.12	-.09	.00	-.07
	1.	2.	3.	4.
Female Participants				
Positive Affect	-.05	-.01	.04	-.04
Anger	.10**	.10**	.10**	.17***
Self-Esteem	-.05	-.03	.02	-.03
Life Satisfaction	-.04	-.04	.02	-.05
General Happiness	-.05	-.06	-.01	-.08*

Note: * $p < .05$; ** $p < .01$ *** $p < .001$

Hypothesis 7: Controlling for identity-specific dimensions was predicted to eliminate difference in well-being between the self-reported sexual identity categories

Minority stress theory suggests identity-specific stressors associated with minority labels affect an individual's well-being (Meyer, 2003). For this reason, this research has explored whether controlling for identity-specific dimensions would eliminate disparities in psychological well-being between different self-reported sexual identities. To test this hypothesis, first, a series of Pearson's correlations were conducted to determine which identity-specific dimensions were associated with psychological well-being. Table 14 has presented these results. Only identity factors that produced a moderate relationship to well-being or sexual identity were taken to the next stage of analysis. From these correlations, factors included in further analyses were Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, Identity Affirmation, Identity Centrality, Identity Disclosure and the Presumption of Heterosexuality.

Table 14.
Pearson correlations between the psychological well-being variables and the identity-related factors for male and female participants.

		Positive Affect	Negative Affect	Anger	Self-Esteem	Life Satisfaction	General Happiness
Acceptance Concerns	Male	-.35***	.35***	.31***	-.25**	-.31***	-.30***
	Female	-.32***	.30***	.27***	.10*	-.26***	-.23***
Concealment Motivation	Male	-.25***	.26***	.24***	-.08	-.25**	-.24**
	Female	-.22***	.20***	.18***	-.06	-.24***	-.23***
Identity Uncertainty	Male	-.21*	.20*	.07	-.05	-.12	-.18*
	Female	-.20***	.21***	.20***	.02	-.20***	-.21***
Internalised Homonegativity	Male	-.28***	.26***	.17*	.05	-.31***	-.34***
	Female	-.27***	.28***	.16***	.02	-.29***	-.26***
Difficult Process	Male	-.18*	.19*	.05	.19	-.18	-.20*
	Female	-.19***	.19***	.16**	-.01	-.18***	-.19***
Identity Superiority	Male	.03	-.00	-.01	-.12	.08	-.06
	Female	-.11*	.18***	.11*	-.04	-.08	-.13*
Identity Affirmation	Male	-.26**	-.16*	-.16	.18*	.16	.21**
	Female	.25***	.16***	-.08	.11*	.20***	.16***
Identity Centrality	Male	.03	-.02	-.05	-.05	.09	-.06
	Female	.11*	-.06	-.09	.03	.12*	.05
Identity Disclosure	Male	.32***	.28***	-.12	-.03	.29***	.37***
	Female	.28***	.25***	-.161***	.05	.31***	.23***
Presumption of Heterosexuality	Male	.05	-.06	-.01	-.05	.05	.07
	Female	-.04	.03	.05	-.08*	-.06	-.06

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

Second, a series of one-way ANCOVAs were used to control for these variables, seeing whether these alter the differences in psychological well-being found between different sexual identities. Additionally, an ANCOVA was conducted only if the original analyses demonstrated significant differences between sexual identities. All post hoc analysis was conducted using the Sidak procedure as was recommended by Field (2009). For significant findings, there was a comment on whether the effect size of the finding had differed between the original analysis and the ANCOVA analysis. Table 15 has presented the inferential statistics from these analyses.

As demonstrated by Table 15, four of the 10 ANCOVAs were non-significant. In male participants, there was a significant difference found for life satisfaction. Unexpectedly, the effect size of this significant finding was larger when controlling for the identity-related factors. New post hoc analysis found men identifying as heterosexual reported higher levels of life satisfaction in comparison to those with gay and other identities, and men with asexual identities reported higher levels of life satisfaction when compared with those identifying as other. The remaining analyses in the male sample were no longer significant.

In female participants, the differences in positive affect, negative affect, anger and life satisfaction were still significant. The effect sizes produced, however, were somewhat smaller. Post hoc Sidak analyses revealed no significant pairwise comparisons between sexual identity categories in terms of their negative affect and anger. The analysis of post hoc differences in positive affect demonstrated women identifying as heterosexual reported higher levels of positive affect when compared with those identifying as mostly heterosexual. Post hoc analysis for life satisfaction revealed women identifying as heterosexual reported higher levels of life satisfaction when compared to those identifying as other. The ANCOVA where the dependent variable was general happiness was not significant, once controlling for the identity-related factors.

Table 15.

Inferential statistics of ANCOVA analysis of the differences in psychological well-being variables between sexual identities.

	F statistic	p value	r
Positive Affect			
Male	1.97	.050	.24
Female	2.31*	.019	.17
Negative Affect			
Male	0.88	.538	.16
Female	2.45*	.013	.15
Anger			
Female	2.94**	.003	.17
Self-Esteem			
Female	0.13	.993	.08
Life Satisfaction			
Male	3.16**	.002	.30
Female	2.18*	.027	.16
General Happiness			
Male	1.85	.069	.23
Female	1.13	.344	.10

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

Sexual Identity Development, Identity-Specific Factors, and Psychological Well-Being

Hypothesis 8: Individuals in different phases of development were expected to differ in their levels of psychological well-being

Sexual identity development may have a chaotic effect on psychological well-being. Ever increasing awareness and understanding of self can be beneficial to one's well-being, yet research demonstrates development does not have a linear relationship with well-being (Halpin & Allen, 2004; Rosario et al., 2006; Swann & Spivey, 2004). That is, early and later phases of development may report higher levels of well-being than those in the middle phases where exploration of identity is characteristic. Based on research such as Swann and Spivey (2004), the later phase of development in the individual and group developmental branch (Internalisation/Synthesis) was predicted to differ significantly from earlier phases. More specifically, they were expected to have higher levels of well-being when compared to the remaining phases.

Table 16.
Descriptive statistics of the phases of the individual developmental branch in terms of their psychological well-being variables.

	Individual Developmental Branch											
	Awareness					Exploration						
	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI
Positive Affect												
Male	7	27.57 (3.26)	24.56 - 30.59	9	31.89 (5.23)	27.87 - 35.91	17	31.76 (6.06)	28.65 - 34.88	109	36.02 (6.31)	34.82 - 37.22
Female	40	28.98 (7.03)	26.73 - 31.22	38	31.66 (7.55)	29.18 - 34.14	72	31.58 (7.82)	29.74 - 33.42	280	34.96 (6.63)	34.18 - 35.74
Negative Affect												
Male	7	34.29 (6.63)		9	29.67 (8.14)		17	30.53 (10.42)		110	24.32 (8.04)	
Female	39	32.26 (9.18)		36	29.83 (10.75)		71	29.72 (8.92)		284	24.77 (7.72)	
Anger												
Male	7	18.00 (1.83)	16.31 - 19.69	9	14.44 (5.53)	10.20 - 18.69	17	13.82 (4.48)	11.52 - 16.12	108	13.03 (4.58)	12.15 - 13.90
Female	39	16.26 (4.72)	14.73 - 17.79	36	16.61 (4.69)	15.02 - 18.20	73	15.34 (4.04)	14.40 - 16.28	288	13.52 (4.15)	13.04 - 14.00
Self-Esteem												
Male	7	27.86 (2.04)	25.97 - 29.74	9	27.56 (4.00)	24.48 - 30.63	16	26.06 (5.09)	23.35 - 28.78	107	26.62 (2.37)	26.62 - 27.53
Female	39	28.15 (2.47)	27.35 - 28.95	35	26.71 (2.23)	25.95 - 27.48	73	26.75 (2.82)	26.09 - 27.48	283	27.40 (2.46)	27.11 - 27.68
Life Satisfaction												
Male	7	3.86 (1.57)	2.40 - 5.31	9	5.22 (1.20)	4.30 - 6.15	17	4.06 (1.52)	3.28 - 4.84	110	5.11 (1.14)	4.89 - 5.33
Female	40	4.03 (1.59)	3.52 - 4.53	38	4.34 (1.46)	3.86 - 4.82	74	4.51 (1.39)	4.19 - 4.83	288	5.12 (1.32)	4.97 - 5.27
General Happiness												
Male	7	4.14 (1.35)	2.90 - 5.39	9	4.14 (1.35)	2.90 - 5.39	17	4.59 (1.70)	3.72 - 5.46	110	5.08 (1.50)	4.80 - 5.36
Female	40	4.23 (1.51)	3.74 - 4.71	38	4.16 (1.73)	3.59 - 4.73	74	4.31 (1.64)	3.93 - 4.69	287	5.15 (1.50)	4.98 - 5.32

To explore this hypothesis a series of one-way ANOVAs were utilized, where the independent variable was the phase of development and the psychological well-being variables were placed as the dependent variable (i.e. positive affect, anger, self-esteem, life satisfaction, and general happiness). Gabriel Hochberg's GT2 or Games-Howell procedures were implemented, depending on the whether or not the homogeneity of variances was significant. Due to the moderate effect size of education and age on negative affect, to explore the above hypothesis an ANCOVA was conducted. The fixed factor was the phases of individual or group sexual identity development, the dependent variable was negative affect, and the co-variates were age and education. Post hoc analysis utilised the Sidak procedure. Table 16 and 17 presents the descriptive statistics for the differences in psychological well-being variables between phases in the individual and group branch of McCarn and Fassinger's (1996) model, respectively. The inferential statistics can be seen in Table 18.

Overall, Table 18 demonstrated the analyses found significant differences in the psychological well-being variables between phases of both individual and group developmental branches of development for both male and female participants. The only ANOVAs found to be non-significant were differences in self-esteem and general happiness in male participants in different phases of individual developmental branch, and differences in anger between men in different phases of the group developmental branch. Post hoc analysis demonstrated significant pairwise comparisons typically existed between individuals in the Synthesis phase of either individual and group developmental branches and the remaining phases of development. That is, men and women in the Synthesis phase of either individual and group developmental branch generally reported higher levels of positive affect, self-esteem, life satisfaction and general happiness, and lower levels of anger and negative affect than those in other phases (as seen in Table 16 and 17).

Table 17.

Descriptive statistics of the phases of the group developmental branch in terms of their psychological well-being variables.

	Group Developmental Branch										Synthesis	
	Awareness			Exploration			Commitment					
	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI
Positive Affect												
Male	9	35.67 (4.03)	32.57 - 38.77	9	28.33 (8.25)	21.99 - 34.67	21	31.67 (5.76)	29.05 - 34.29	103	35.97 (6.15)	34.77 - 37.17
Female	13	30.77 (6.53)	26.82 - 34.72	54	31.87 (7.51)	29.82 - 33.92	57	29.11 (7.07)	27.23 - 30.98	308	34.75 (6.85)	33.98 - 35.52
Negative Affect												
Male	9	29.11 (8.33)	-	9	33.11 (9.82)	-	21	30.71 (8.36)	-	104	24.00 (8.06)	-
Female	13	28.85 (5.96)	-	51	29.45 (9.84)	-	56	32.13 (8.51)	-	312	25.24 (8.19)	-
Anger												
Male	9	14.11 (5.78)	9.67 - 18.55	9	14.44 (6.58)	9.39 - 19.50	21	15.00 (4.65)	12.88 - 17.12	102	13.00 (4.31)	12.15 - 13.85
Female	13	15.08 (4.25)	12.51 - 17.65	54	15.06 (5.10)	13.66 - 16.45	58	16.88 (4.74)	15.63 - 18.12	314	13.66 (3.99)	13.22 - 14.11
Self-Esteem												
Male	9	28.67 (2.12)	27.04 - 30.30	9	24.56 (5.88)	20.04 - 29.07	20	26.95 (2.96)	25.56 - 28.34	101	27.12 (2.45)	26.63 - 27.60
Female	12	27.92 (2.15)	26.55 - 29.28	53	27.58 (2.36)	26.94 - 28.23	58	27.66 (2.62)	26.97 - 28.34	310	27.16 (2.54)	26.87 - 27.44
Life Satisfaction												
Male	9	5.44 (1.24)	4.49 - 6.39	9	3.89 (1.96)	2.38 - 5.40	21	4.52 (1.21)	3.97 - 5.07	104	5.06 (1.17)	4.83 - 5.29
Female	13	4.77 (.73)	4.33 - 5.21	55	4.65 (1.35)	4.29 - 5.02	58	4.14 (1.33)	3.79 - 4.49	318	5.02 (1.42)	4.86 - 5.18
General Happiness												
Male	9	4.44 (1.59)	3.22 - 5.67	9	3.78 (1.99)	2.25 - 5.30	21	4.48 (1.60)	3.75 - 5.20	104	5.15 (1.42)	4.88 - 5.43
Female	13	5.08 (1.12)	4.40 - 5.75	55	4.31 (1.72)	3.84 - 4.77	58	3.98 (1.53)	3.58 - 4.38	317	5.06 (1.54)	4.89 - 5.23

In male participants, post hoc analysis found pairwise comparisons were not found to be significant in the following analyses: differences in self-esteem, life satisfaction, and general happiness between phases of the group developmental branch. Post hoc analysis of the significant results from the individual developmental branch found significant pairwise comparisons between the Awareness and Synthesis phases in terms of positive affect, negative affect and anger. That is, men who were in the Awareness phase of the individual developmental branch (i.e. becoming aware of a sense of difference between themselves and other males) reported lower levels of positive affect and higher levels of negative affect and anger than men in the Synthesis phase (i.e. the incorporation of a self-defined sexual identity into their global identity). Additionally, post hoc analysis also revealed a significant difference in negative affect and life satisfaction between the Commitment and Synthesis phases, where men in the Commitment phase of the individual identity branch (i.e. the defining process surrounding one's sexual identity) reported greater negative affect and less life satisfaction than those in the Synthesis phase.

Post hoc analysis for the significant findings within the group developmental branch demonstrated men in the Exploration phase (i.e. knowledge attainment of people with LGB+ identities and the LGB+ community) reported lower levels of positive affect than men in the Synthesis phase of group identity development (i.e. identification with LGB+ communities and incorporation of the group identity). Also, analysis found men in the Commitment phase (i.e. growing awareness of societal attitudes and treatment of LGB+ individuals) reported lower levels of positive affect and greater levels of negative affect when compared to those in the Synthesis phase.

Post hoc analysis in female participants found significant pairwise comparisons in all results. The post analysis of individual developmental branch found women in the Synthesis phase reported higher levels of positive affect, life satisfaction and general happiness and lower levels of anger when compared to all other phases of the individual developmental branch. Women in the Synthesis phase also reported lower levels of negative affect when compared to women in Awareness and Commitment phases of the individual developmental branch. Surprisingly, those in the Awareness phase reported higher levels of self-esteem than women in the Commitment phase.

Post hoc analysis of the group developmental branch revealed women in the Commitment phase reported lower levels of positive affect, self-esteem, life satisfaction

and general happiness, and higher levels of anger and negative affect when compared to women in the Synthesis phase. Additionally, women in the Exploration phase of the group developmental branch reported lower levels of positive affect than those in the Synthesis phase.

Table 18.

Inferential statistics of ANCOVA analysis of the differences in psychological well-being variables between phases of individual and group developmental branches.

	Individual Developmental Branch		Group Developmental Branch	
	F statistic	r	F statistic	r
Positive Affect				
Male	6.77*** ^a	.36	6.47*** ^a	.35
Female	12.44*** ^a	.28	12.55*** ^a	.28
Negative Affect				
Male	5.37*** ^c	.31	4.80** ^c	.31
Female	9.85*** ^c	.25	11.93*** ^c	.26
Anger				
Male	2.83* ^a	.24	1.31	.17
Female	11.12*** ^a	.27	10.20*** ^b	.26
Self-Esteem				
Male	0.89 ^b	.14	3.34** ^b	.26
Female	3.44* ^a	.15	3.52* ^a	.09
Life Satisfaction				
Male	5.78*** ^a	.33	3.75* ^b	.27
Female	11.83*** ^a	.27	7.05*** ^a	.21
General Happiness				
Male	1.93	.20	3.52* ^a	.27
Female	11.34*** ^a	.21	10.22*** ^a	.26

Note: a = Gabriel Hochberg's GT2 procedure; b = Games-Howell procedure; c = Sidak procedure

*p < .05; **p < .01 ***p < .001

Hypothesis 9: Phases of development were hypothesised to differ in their levels of sexual identity-specific dimensions

People in different phases of sexual identity development experience different levels of identity-specific factors (e.g. Halpin & Allen, 2004; Savin-Williams, 2011; Wright & Perry, 2006). For example, later parts of development may be associated with internal congruence and less identity confusion (Halpin & Allen, 2004; Swann & Spivey,

2004). Thus, people in different phases of development were predicted to differ in levels of sexual identity-specific dimensions. Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, Difficulty Process and the Presumption of Heterosexuality were hypothesised to be higher in earlier phases of development. Whereas, higher levels of Identity Superiority, Identity Centrality, and Identity Disclosure were expected in people in later phases of development when compared to those in earlier phases of development. A series of one-way ANOVAs were conducted with the phases of development (fixed factor) and the identity-related factor (test variable). Post hoc analysis employed either Hochberg's GT2 or Games-Howell, depending on the Levine's Statistic. An ANCOVA was used to examine differences in identity disclosure (test variable) between the phases of development (fixed factor), while controlling for age (covariate). Main effects were compared using the Sidak test. Table 19 and 20 have demonstrated the descriptive statistics. Table 21 has presented the inferential statistics.

The results demonstrated the majority of identity-specific factors differed significantly between people in different developmental phases, both in the individual and group developmental branch (See Table 21). Non-significant results were found for eight of the 20 analyses conducted in the male sample. These non-significant findings include: differences in the Difficult process variable, Identity Superiority, and the Presumption of Heterosexuality between men in different phases of the individual and group developmental branch, as well as differences in Identity Centrality and Identity disclosure between those in different phases of the group developmental branch. This suggests men in different phases of development do not experience more or less difficulty in their developmental process, superiority in their identity or are presumed to be heterosexual at a higher or lower rate than each other. In the female sample, non-significant findings arose in two of the 20 analyses, including non-significant differences in Identity Superiority and Identity Centrality between women in differing phases of the individual and group identity developmental branches, respectively.

Table 19.

Descriptive statistics of the phases of the individual developmental branch in terms of their identity-specific factors.

	Individual Developmental Branch											
	Awareness			Exploration			Commitment			Synthesis		
	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI
Acceptance												
Concerns												
Male	7	5.38 (0.71)	4.73 - 6.03	9	4.81 (1.88)	3.37 - 6.26	15	4.31 (1.68)	3.38 - 5.24	110	3.73 (1.57)	3.43 - 4.02
Female	39	4.92 (1.59)	4.41 - 5.44	36	4.41 (1.56)	3.88 - 4.94	72	4.63 (1.57)	4.26 - 4.99	289	3.91 (1.51)	3.73 - 4.08
Concealment												
Motivation												
Male	7	5.57 (1.79)	3.91 - 7.23	10	5.17 (1.69)	3.95 - 6.38	16	4.83 (1.89)	3.83 - 5.84	109	3.59 (1.53)	3.30 - 3.88
Female	40	5.16 (1.37)	4.72 - 5.60	36	4.93 (1.54)	4.41 - 5.45	73	4.63 (1.55)	4.26 - 4.99	289	3.58 (1.55)	3.40 - 3.76
Identity Uncertainty												
Male	7	4.86 (2.01)	2.99 - 6.72	10	4.20 (1.76)	2.94 - 5.46	16	3.36 (1.84)	2.38 - 4.34	110	1.86 (1.12)	1.65 - 2.07
Female	40	4.74 (1.62)	4.22 - 5.26	36	4.54 (1.73)	3.96 - 5.13	73	3.29 (1.71)	2.89 - 3.69	286	2.26 (1.48)	2.09 - 2.43
Internalised												
Homonegativity												
Male	7	3.81 (1.73)	2.21 - 5.41	10	3.57 (1.76)	2.30 - 4.83	17	2.98 (2.14)	1.88 - 4.08	110	2.13 (1.31)	1.88 - 2.38
Female	39	3.46 (1.78)	2.88 - 4.04	36	2.61 (1.49)	2.11 - 3.12	72	2.61 (1.64)	2.22 - 2.99	289	1.89 (1.23)	1.74 - 2.03
Difficult Process												
Male	6	4.44 (1.67)	2.69 - 6.20	10	4.07 (1.51)	2.98 - 5.15	14	4.48 (1.61)	3.55 - 5.41	88	3.94 (1.57)	3.61 - 4.27
Female	39	4.55 (1.26)	4.14 - 4.95	33	4.17 (1.24)	3.73 - 4.61	69	4.22 (1.43)	3.87 - 4.56	248	3.63 (1.56)	3.43 - 3.82
Identity Superiority												
Male	7	2.33 (1.44)	1.00 - 3.67	10	2.63 (1.91)	1.27 - 4.00	16	1.83 (1.17)	1.21 - 2.46	110	2.24 (1.26)	2.00 - 2.48
Female	40	1.88 (1.20)	1.49 - 2.26	35	1.89 (1.04)	1.53 - 2.24	72	1.91 (1.19)	1.63 - 2.19	288	2.10 (1.16)	1.96 - 2.23
Identity Affirmation												
Male	7	4.38 (.45)	3.97 - 4.80	10	4.10 (1.58)	2.97 - 5.23	16	4.27 (1.85)	3.29 - 5.25	110	5.65 (1.24)	5.41 - 5.88
Female	40	4.40 (1.45)	3.94 - 4.86	36	4.69 (1.39)	4.22 - 5.17	70	5.05 (1.22)	4.76 - 5.34	289	5.71 (1.18)	5.57 - 5.84
Identity Centrality												
Male	7	3.09 (1.39)	1.80 - 4.38	8	3.53 (1.69)	2.11 - 4.94	15	3.59 (1.34)	2.85 - 4.33	99	4.42 (1.31)	4.16 - 4.69
Female	36	3.53 (.99)	3.19 - 3.86	30	3.49 (1.20)	3.05 - 3.94	67	4.13 (1.27)	3.82 - 4.44	265	4.45 (1.32)	4.29 - 4.61
Identity Disclosure												
Male	7	2.24 (.99)	1.33 - 3.15	10	2.36 (1.28)	1.44 - 3.28	19	2.57 (1.44)	1.88 - 3.27	113	4.33 (1.60)	4.03 - 4.63
Female	41	2.28 (1.01)	1.96 - 2.59	38	2.36 (1.29)	1.93 - 2.78	77	3.33 (1.50)	2.99 - 3.67	300	4.08 (1.56)	3.90 - 4.26
Presumption of Heterosexual												
Male	7	3.71 (.86)	2.92 - 4.51	10	3.50 (1.18)	2.66 - 4.34	19	3.95 (.71)	3.61 - 4.29	118	3.52 (.89)	3.36 - 3.68
Female	42	4.58 (.49)	4.43 - 4.74	42	4.43 (.67)	4.22 - 4.64	80	4.22 (.79)	4.04 - 4.40	306	4.11 (.80)	4.00 - 4.20

The remainder of the ANOVA and ANCOVA results demonstrated significant differences, with effect sizes ranging between small and large (seen in Table 21). Post hoc analysis of the individual branch in the male sample found men in the Synthesis phase reported less Acceptance Concerns and Identity Uncertainty, and more Identity Affirmation and Identity Disclosure when compared to men in the Awareness phase (as seen in Table 19). Those in the Synthesis phase also reported less Concealment Motivation than men in the Exploration phase, and more Identity Affirmation than men in the Commitment Phase of the individual branch. Male participants in the Exploration and Commitment phase endorsed significantly less Identity Disclosure than men in the Synthesis phase. No other significant pairwise differences were found.

Similar to male participants, post hoc analysis of the differences in the female sample demonstrated those in the Synthesis phase of the individual developmental branch reported lower levels of Acceptance Concerns and Identity Uncertainty, and higher levels of Identity Affirmation and Identity Disclosure than those in all other phases. Women in the Synthesis phase also endorsed less Concealment Motivation, Internalised Homonegativity, Difficult Process, and the Presumption of Heterosexuality, and more Identity Centrality than those in the Awareness phase. Those in the Commitment phase of the individual branch reported more Concealment Motivation than women in the Synthesis phase, as well as endorsing more Identity Disclosure than those in the Awareness or Exploration phases. Additionally, women in the Commitment phase reported having experienced less Presumption of Heterosexuality than those in the Awareness Phase. Finally, those in the Exploration phase reported significantly less Identity Centrality and more experiences of the Presumption of Heterosexuality.

Despite significant ANOVA results for five of the ten identity-specific factors, there were few significant pairwise differences in men in different phases of the group developmental branch. These findings demonstrated men in the Synthesis phase reported significantly less Concealment Motivation and Internalised Homonegativity than those in the Awareness phase of the group developmental branch. No other pairwise comparisons were found to be significant.

Table 20.

Descriptive statistics of the phases of the group developmental branch in terms of their identity-specific factors.

	Group Developmental Branch											
	Awareness			Exploration			Commitment			Synthesis		
	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI	N	M (SD)	95% CI
Acceptance Concerns												
Male	9	4.59 (1.49)	3.45 - 5.74	9	4.96 (1.59)	3.74 - 6.18	20	4.73 (1.67)	3.95 - 5.51	103	3.64 (1.54)	3.34 - 3.94
Female	15	5.20 (1.19)	4.54 - 5.86	50	5.10 (1.39)	4.70 - 5.50	58	5.25 (1.56)	4.84 - 5.66	312	3.75 (1.43)	3.59 - 3.91
Concealment Motivation												
Male	10	5.23 (1.57)	4.11 - 6.36	8	4.96 (1.36)	3.82 - 6.10	20	4.23 (1.82)	3.38 - 5.08	104	3.68 (1.65)	3.36 - 4.00
Female	15	4.91 (1.04)	4.33 - 5.49	49	5.21 (1.47)	4.79 - 5.63	58	4.76 (1.74)	4.31 - 5.22	313	3.65 (1.53)	3.48 - 3.82
Identity Uncertainty												
Male	10	3.48 (1.72)	2.25 - 4.70	9	4.19 (2.09)	2.59 - 5.80	20	2.61 (1.83)	1.76 - 3.47	104	2.02 (1.32)	1.76 - 2.27
Female	15	4.53 (1.47)	3.72 - 5.35	51	3.74 (1.95)	3.19 - 4.29	56	2.96 (1.81)	2.48 - 3.45	313	2.61 (1.69)	2.42 - 2.80
Internalised Homonegativity												
Male	10	4.27 (1.98)	2.85 - 5.68	9	2.78 (1.18)	1.87 - 3.68	21	2.68 (1.89)	1.82 - 3.54	104	2.14 (1.35)	1.88 - 2.41
Female	15	3.33 (2.08)	2.18 - 4.48	50	2.55 (1.70)	2.06 - 3.03	58	2.73 (1.84)	2.25 - 3.21	311	2.00 (1.25)	1.86 - 2.14
Difficult Process												
Male	10	4.57 (1.74)	3.32 - 5.81	9	4.44 (1.45)	3.33 - 5.56	17	4.37 (1.83)	3.43 - 5.31	82	3.86 (1.49)	3.53 - 4.19
Female	14	4.00 (1.42)	3.18 - 4.82	45	4.83 (1.31)	4.44 - 5.22	55	4.67 (1.46)	4.28 - 5.07	273	3.52 (1.43)	3.35 - 3.69
Identity Superiority												
Male	10	1.70 (0.85)	1.09 - 2.31	9	2.59 (1.67)	1.31 - 3.88	20	2.28 (1.69)	1.49 - 3.07	104	2.24 (1.24)	2.00 - 2.48
Female	15	1.93 (0.97)	1.40 - 2.47	51	2.08 (1.23)	1.74 - 2.43	58	2.78 (1.54)	2.37 - 3.18	311	1.88 (1.02)	1.77 - 2.00
Identity Affirmation												
Male	10	3.77 (1.17)	2.93 - 4.60	9	4.96 (1.09)	4.13 - 5.80	20	4.60 (2.04)	3.65 - 5.55	104	5.64 (1.18)	5.41 - 5.87
Female	15	4.38 (1.66)	3.46 - 5.30	50	5.28 (1.42)	4.88 - 5.68	57	5.47 (1.41)	5.09 - 5.84	313	5.46 (1.25)	5.32 - 5.59
Identity Centrality												
Male	9	3.53 (1.65)	2.27 - 4.80	8	4.05 (1.46)	2.83 - 5.27	20	4.51 (1.66)	3.73 - 5.29	92	4.21 (1.30)	3.94 - 4.48
Female	12	3.63 (1.72)	2.54 - 4.72	48	4.30 (1.15)	3.96 - 4.64	51	4.50 (1.45)	4.09 - 4.91	285	4.21 (1.31)	4.06 - 4.37
Identity Disclosure												
Male	10	2.15 (1.40)	1.15 - 3.15	10	2.34 (1.17)	1.50 - 3.18	21	3.48 (1.69)	2.71 - 4.25	108	4.25 (1.62)	3.94 - 4.56
Female	17	2.47 (1.50)	2.77 - 4.78	60	2.69 (1.43)	3.61 - 4.51	57	3.16 (1.38)	4.28 - 4.98	326	3.92 (1.60)	4.59 - 4.86
Presumption of Heterosex.												
Male	10	3.80 (.89)	3.16 - 4.44	10	4.15 (.47)	3.81 - 4.49	22	3.57 (1.11)	3.08 - 4.06	112	3.51 (.86)	3.35 - 3.67
Female	17	4.59 (.48)	4.34 - 4.83	61	4.39 (.55)	4.25 - 4.53	59	4.34 (.80)	4.13 - 4.55	336	4.11 (.82)	4.03 - 4.20

Post hoc analysis in female participants demonstrated a number of significant pairwise comparisons. Women in the Commitment phase of the group developmental branch reported more Acceptance Concerns, Concealment Motivation, Internalised Homonegativity, and Difficult Process, and less Identity Disclosure than those in the Synthesis phase. Women in the Commitment phase also reported significantly higher levels of Identity Superiority when compared to women in all other phases. Additionally, women in the Exploration phase reported significantly lower levels of Acceptance Concerns than those in the Commitment phase. They also experienced more Presumptions of Heterosexuality and less Identity Disclosure than those in the Synthesis phase. Women in the Awareness phase reported more Identity Uncertainty than those in the Synthesis phase, as well as endorsing more experiences of the Presumption of Heterosexuality when compared to those in the Commitment and Synthesis phases. No significant pairwise comparisons were found between women in different phases of the group developmental branch in terms of reported level of Identity Affirmation.

Table 21.

Inferential statistics of ANCOVA analysis of the differences in identity-related variables between phases of individual and group developmental branches.

	Individual Developmental Branch		Group Developmental Branch	
	F statistic	r	F statistic	r
Acceptance Concerns				
Male	3.82** ^b	0.28	4.80** ^a	0.31
Female	8.38*** ^b	0.23	29.51*** ^b	0.41
Concealment Motivation				
Male	7.80*** ^b	0.38	4.10** ^a	0.29
Female	23.17*** ^b	0.37	21.91*** ^b	0.36
Identity Uncertainty				
Male	23.30*** ^b	0.58	8.54*** ^b	0.39
Female	49.85*** ^b	0.51	11.29*** ^b	0.27
Internalised Homonegativity				
Male	6.28*** ^b	0.34	6.84*** ^b	0.36
Female	19.00*** ^b	0.34	8.88*** ^b	0.24
Difficult Process				
Male	0.61	0.13	1.19	0.17
Female	6.63*** ^a	0.22	18.15*** ^b	0.35
Identity Superiority				
Male	0.82	0.13	0.78	0.13
Female	1.02	0.08	10.31*** ^b	0.26
Identity Affirmation				
Male	9.67*** ^b	0.42	8.77*** ^a	0.40
Female	20.52*** ^a	0.35	3.44* ^b	0.15
Identity Centrality				
Male	4.25** ^a	0.30	1.05	0.16
Female	9.78*** ^a	0.26	1.56	0.11
Identity Disclosure				
Male	2.93* ^c	0.24	0.72 ^c	0.12
Female	9.07*** ^c	0.24	3.94** ^c	0.16
Presumption of Heterosex.				
Male	1.34	0.16	1.82	0.19
Female	6.25*** ^b	0.20	4.68*** ^b	0.17

Hypothesis 10: Controlling for identity-specific dimensions was predicted to eliminate difference in well-being between the phases of development

Literature has suggested differences in psychological outcomes between phases of sexual identity development are caused by various processes within different parts of

LGBQ+ identity development (Halpin & Allen, 2004; Wright & Perry, 2006). For this reason, it was predicted once controlling for the identity-specific dimensions associated with the phases of development, the differences in psychological well-being between those phases would be reduced or eliminated. To explore this, a series of ANCOVAs were conducted. These placed identity-specific factors – which produced moderate effect sizes in either analysis of their relationship with well-being or the phases of development – as co-variates in the analyses. The factors utilised in these analyses included: Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, Difficult Process, Identity Affirmation, Identity Centrality, and Identity Disclosure. The inferential statistics can be seen in Table 22. The post hoc analysis incorporated the Sidak procedure as recommended by Field (2009).

Individual Developmental Branch

The ANCOVA analyses revealed once controlling for the identity-related factors, all but one of the differences found between the phases of individual identity development were eliminated. The remaining significant difference existed in negative affect between women in different phases of the individual developmental branch. Post hoc analysis of this result revealed no significant pairwise comparisons.

Group Developmental Branch

Once controlling for the identity-related factors, the majority of the significant findings in the group developmental branch were eliminated. Three findings remained significant: differences in self-esteem between men in different phases of group developmental branches; and differences in general happiness and anger between women in different phases. Post hoc results of the difference in self-esteem in men in different phases of the group developmental branch revealed those in the Exploration phase reported lower self-esteem than men in other phases of development. Post hoc analysis of the female sample demonstrated women in the Synthesis phase endorsed significantly less anger and more general happiness than those in the Commitment phase of the group developmental branch.

Table 22.

Inferential statistics of ANCOVA analysis of the differences in psychological well-being variables between the phases of sexual identity development.

	F statistic	p value	r
Positive Affect			
Male Individual Branch	1.61	.191	0.21
Male Group Branch	0.73	.535	0.13
Female Individual Branch	1.81	.145	0.12
Female Group Branch	1.72	.162	0.12
Negative Affect			
Male Individual Branch	2.01	.117	0.23
Male Group Branch	0.65	.586	0.12
Female Individual Branch*	3.06	.028	0.15
Female Group Branch	2.47	.062	0.15
Anger			
Male Individual Branch	1.61	.192	0.20
Female Individual Branch	2.32	.075	0.13
Female Group Branch***	5.49	.001	0.21
Self-Esteem			
Male Group Branch**	4.97	.003	0.33
Female Individual Branch	0.96	.410	0.08
Female Group Branch	0.27	.848	0.04
Life Satisfaction			
Male Individual Branch	1.34	.264	0.19
Male Group Branch	0.18	.913	0.06
Female Individual Branch	0.76	.520	0.08
Female Group Branch	1.12	.340	0.09
General Happiness			
Male Group Branch	0.10	.956	0.04
Female Individual Branch	2.44	.064	0.13
Female Group Branch*	3.57	.014	0.17

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

Chapter 5:

Discussion

Sexual identity is the mindful recognition and integration of a consistent and coherent definition of one's sexual behaviours and orientation. This construct is operationalised a number of ways in the literature, which seem to centre around the 'traditional categories' (i.e. heterosexual, gay and bisexual). Sexual identity, however, is more diverse than this limited selection suggests, resulting in a number of colloquial categories, such as pansexual, being introduced to help showcase this diversity. This research aimed to offer participants with a number of these options, as well as offering a continuum approach to help operationalise these categories. Having an understanding of these various identities can highlight the diversity and complexity of sexual identity, as well as narrowing down where disparities in psychological well-being lie.

Understanding how the disparities in well-being between heterosexual and LGBQ+ identities are caused can help researchers and clinicians understand how best to support people with LGBQ+ identities, reducing these disparities. The literature demonstrated people with these identities report more mental illness and less psychological well-being than do those with heterosexual identities (e.g. Becker et al., 2014; Bostwick et al., 2010). Furthermore, research reveals bisexual and questioning identities are associated with more negative outcomes than people with lesbian and gay identities (e.g. Bejakovich, 2013; Espelage et al., 2008; Jorm et al., 2002). LGBQ+ sexual identity development is an unavoidable conscious pathway for people with LGBQ+ identities. It is also associated with psychological well-being, with a positive relationship existing between the integration of one's sexual identity and their well-being (e.g. Halpin & Allen, 2004; Swann & Spivey, 2004). Minority stress theory, cognitive dissonance theory and interpersonal congruence theory have been used to explain the disparities between heterosexual and LGBQ+ identities (e.g. Meyer, 2003). Dimensions stemming from these models have also been implicated in LGBQ+ sexual identity development, and its relationship to psychological well-being (e.g. Rowen & Malcolm, 2002). These dimensions, however, have not been directly controlled for to see whether this reduces or eliminates the disparities between

sexual identities, as well as the differences in well-being between people in different phases of LGBQ+ sexual identity development.

A review of the literature surrounding these areas resulted in three main aims for this doctoral research: first, to capture greater diversity than the traditional tri-chotomous approach; second, to examine differences in psychological well-being between these sexual identities and between phases of development; and finally, to investigate whether sexual identity-related dimensions (hypothesised from minority stress theory, cognitive dissonance theory and interpersonal congruence theory, as well as other authors in the field) have an effect on the differences in psychological well-being found between sexual identities and phases of development. From these aims, 10 hypotheses were formulated. To investigate these hypotheses, this study created an online study, which was available online between April 2015 and September 2015.

Overall, this research found support for the extension of traditional tri-chotomous categories, as suggested by authors such as Vrangalova and Savin-Williams (2012). Additionally, this research found support for the measure and findings of Epstein et al (2012). There were mixed findings regarding differences in psychological well-being between people with different sexual identities, noting most differences occurring only between those identifying as heterosexual and those identifying as bisexual. Differences in well-being between people in different phases of development were as hypothesised. That is, those with an integrated identity (i.e. in the Synthesis phase) typically demonstrated significantly higher levels of well-being than those in other phases of identity development. As hypothesised, differences in well-being were reduced or eliminated when taking into account sexual identity-specific factors. Further descriptions of the findings are below.

Sexual Identity Continuum

Sexual identity exists on a continuum. Epstein et al (2012) created a measure which places a person's reported same sex and opposite sex experiences on a 14 point continuum by assigning them a mean sexual orientation (MSO). These authors affirmed people with different sexual identities report varying levels of these experiences, and so lie across the continuum. Heterosexual and gay/lesbian identities exist on opposing sides of the continuum and bisexual identities fall in the middle. In the current study's sample, people with heterosexual and gay/lesbian identities were therefore predicted to lie at either side of

the continuum, and those identifying as bisexual were expected to fall in the centre. The study also incorporated mostly heterosexual, mostly gay/lesbian and other in the sexual identity categories, which were also expected to fall in the middle of the continuum. This hypothesis was supported by the results. Results demonstrated significant differences for people identifying as heterosexual, mostly heterosexual, bisexual, mostly gay/lesbian and gay/lesbian identities. Consistent with past research (Bejakovich, 2013; Epstein et al., 2012), men and women with heterosexual identities reported the lowest MSO, yet were not on the extreme of the continuum (i.e. the MSO was not 0 for exclusively heterosexual). Similarly, those identifying as gay/lesbian reported the highest MSO, they were not on the other extreme (i.e. the MSO did not equal 13 for exclusively gay/lesbian). This means most individuals report some incongruent experiences, indicating the traditional categorical definitions may be too restrictive for the individuals identifying with these labels (APA, 2010; Diamond, 2006).

As recommended by various authors, mostly heterosexual and mostly gay/lesbian participants were incorporated into the current study (Vrangalova & Savin-Williams 2012). The current study found people with mostly heterosexual identities reported had a higher MSO than heterosexually-identified people, yet their MSO was significantly lower than those identifying as bisexual. This finding suggests mostly heterosexual identities endorse more same sex experiences than those identified as heterosexual, yet less than those identifying as bisexual, which is consistent with past research (Thompson & Morgan, 2008; Savin-Williams & Vrangalova, 2013). People identifying as mostly gay/lesbian also significantly differed from other sexual identities, having a higher MSO than those identifying as bisexual and a lower MSO than people with gay/lesbian identities. Consistent with past research, this indicates people with mostly gay identities report more same sexuality than people with bisexual identities. Also consistent with the literature those with mostly gay identities report less same sex experiences than those identifying as gay/lesbian (Vrangalova & Savin-Williams, 2012). These results support the utilisation of mostly heterosexual and mostly gay/lesbian in future research, as these categories demonstrate a distinct group of individuals.

Non-binary identities (i.e. bisexual, pansexual, other and questioning) however did not differ from each other nor from those identifying as asexual. This lack of significant difference may have occurred for a number of reasons. This may reflect the difficulty in research to find a language for the new labels arising to describe sexuality (Entrup &

Firestein, 2007). Pansexuality has been defined as the attraction to all gender identities. In contrast, bisexuality refers to attractions of male and female individuals, which would exclude those identifying their gender as other (Deml, 2013; Gonel, 2013). This subtle difference in definition makes it impossible to be captured by the ESOI in its current form because it does not ask participants to rate their attractions, fantasies or behaviours toward those whose gender identity is not the same as the gender assigned at birth (e.g. transgender, intersex, gender-fluid, gender-neutral). Despite this, this is consistent with past literature where pansexual and bisexual identities report similar levels of same and opposite sex experiences (Morandini, Blaszcynski, & Dar-Nimrod, 2016). As the pansexual identity is becoming more prevalent in public domains, research is necessary to learn more about people identifying with this label (Belous & Bauman, 2016). It may be beneficial for the ESOI to be updated to include a scale for gender identities alternative to man or woman.

In the current study, people identifying as asexual did not have a significantly different MSO when compared to those with non-binary sexual identities. This is unexpected as asexuality is defined as the absence of sexual attraction toward any gender (Greaves et al., 2016; The Asexual Network, 2012). The ESOI, however, does not account for this when calculating the MSO. That is, if a participant reported 0 opposite sex experiences and same sex experiences then they would score a MSO of 6.5 (because reverse score of 0 opposite sex scale is 13, then this is added to 0, and then divided by 2). It, therefore, seems the participant is reporting similar levels of same and opposite sex than those reporting 100% sexual experiences toward men and women. It is thus possible the lack of a significant difference could be the result of the limitations of the MSO. If the same sex and opposite sex scales of the ESOI were analysed separately, it is possible that this difference would have been seen.

Another explanation is the items in the inventory that refer to past behaviours in addition to present and future behaviours. Most men and women have engaged in sexual activity between the ages of 15 and 19 (Wellings et al., 2006). Therefore, despite having an absence of attraction, it is possible individuals identifying as asexual would have had sexual experiences, raising their overall MSO. The MSO therefore may not be able to distinguish these participants from those identifying as bisexual, pansexual, other or questioning. The SOR, however, may be able to distinguish this category because

asexuality, which is defined as lacking sexual attraction, is predicted to report lower sexual flexibility when compared to other sexual identities.

Sexual flexibility can be seen as the amount of choice an individual has in the expression of their sexual identity (Epstein & Robertson, 2014). The ESOI measures this through the sexual orientation range (SOR). Epstein et al. (2012) and Bejakovich (2013) demonstrated individuals identifying as bisexual report higher SORs than either heterosexual or gay/lesbian identities. In the current study, it was predicted people with different sexual identities would differ in SOR. More specifically, those with bisexual identities were expected to report the highest SOR, followed by questioning, other, mostly heterosexual and mostly gay/lesbian, gay/lesbian and heterosexual identities. This hypothesis was partially supported. Heterosexually-identified men and women reported significantly lower SORs than all other sexual identities, with the exception of asexually-identified men who were not significantly different from men who identify as heterosexual. Consistent with past research, people with gay/lesbian identities reported higher SORs than heterosexually-identified participants (Bejakovich, 2013). In women, those identifying as lesbian reported significantly higher SORs than those identifying as asexual, yet gay men did not significantly differ from asexual men. Asexually-identified men and women reported significantly lower SORs than all remaining sexual identities. This is not surprising as, by definition, they do not express sexual interest to any gender.

As hypothesised, men and women who identified as bisexual reported the highest SORs when compared to all other sexual identities, except for those identifying as pansexual. Women with pansexual identities also significantly differed to all remaining sexual identities, whereas men identifying as pansexual did not differ from those identified as questioning and other. No other significant differences were found. It is possible a lack of significant difference was found because there are only slight variations in definitions. Diamond (2003) discussed the presence of affectional components to sexual identity. Savin-Williams and Vrangalova (2013) conducted an examination of the mostly heterosexual category, which revealed, participants with mostly heterosexual identities reported less same sex romantic attractions than their same sex sexual attractions when compared to bisexual-identified participants. This implies unlike bisexual-identified individuals, those with mostly heterosexual identities report more desire for those of the same sex than romantic attractions (i.e. are less likely to get into a relationship with members of the same sex). This finding suggests differences in romantic attractions play a

role in self-identity. Future research should assess whether incorporating romantic attraction can differentiate between people identifying as mostly heterosexual, gay/lesbian, other and questioning. Extrapolating from Savin-Williams and Vrangalova, mostly heterosexual and mostly gay/lesbian would be expected to differ by romantic attraction, when compared to bisexual identities.

Overall, there was support for the hypothesis that the sexual identity categories would differ by the variables of the sexual orientation continuum. These results were generally consistent with past research, providing more evidence for the conceptualisation of sexual identity existing on a continuum. By examining the sexual identities through the sexual orientation continuum, usefulness for the extension of self-identity categories was demonstrated. This revealed the need for research to investigate novel categories separately from traditional categories. Future research should update measures of the sexual orientation continuum to incorporate items around individuals who do not have binary gender identities (i.e. man or woman gender identities), such as transgender, as well as exploring romantic or emotional attractions. This would help differentiate newly emerging identities, such as pansexual and mostly gay.

Sexual Identity and Identity-Specific Dimensions

People with LGBQ+ identities are met with a number of challenges in attempting to develop a positive, secure identity. Individual differences in how people manage these challenges can have considerable ramifications on their psychological well-being (Mohr & Kendra, 2011). Minority stress theory suggests sexual minorities (i.e. any sexual identity that is not heterosexual) undergo specific stressors, which have consequences for their psychological functioning (Meyer, 2003). Specific factors investigated by this research included the presumption of heterosexuality, identity disclosure and variables from the LGBIS scale described by Mohr and Kendra (2011).

The most frequently studied dimensions are identity uncertainty, internalised heterosexism (or homonegativity as named by the LGBIS scale), and identity disclosure. Participants identifying as bisexual and other non-binary identities (i.e. mostly heterosexual, mostly gay/lesbian, questioning and other) were expected to report significantly more Identity Uncertainty and Internalised Homonegativity and less Identity Disclosure when compared to those identifying as gay/lesbian. The analyses demonstrated partial support for this hypothesis. As hypothesised, participants identified as gay/lesbian

reported less Identity Uncertainty than all other sexual identities, which is consistent with past research (Bejakovich, 2013; Bregman, Malik, Page, Makynen & Lindahl, 2013; Crowell, Galliher, Dehlin & Bradshaw, 2015; Mohr & Kendra, 2011). Having mostly same sex experiences is beneficial to identity certainty as it reduces contradictory experiences. The presence of both same and opposite sex attractions in identities – such as in bisexuality and those who are questioning – creates conflict increasing levels of uncertainty. Another explanation for the lower uncertainty in lesbian and gay men is the greater validation of these identities, when compared to those who identify as bisexual or another non-binary identity, such as questioning (Balsam & Mohr, 2007). Thus, validation by others of sexual identities, such as gay/lesbian identities, may create less pressure to conform and less inner conflict, resulting in more certainty in one's sexual identity.

Also consistent with past research and the hypothesis, people identifying as gay/lesbian reported more identity disclosure than those identifying as bisexual, questioning and asexual (e.g. Bejakovich, 2013; Costa et al., 2013). Additionally, gay men report higher levels of identity disclosure than mostly gay men. Decisions to disclose vary by context and other factors. Dimensions related to sexual identity – such as identity uncertainty – can lend a comment for these findings (Bejakovich, 2013; Costa et al., 2013; Mohr & Kendra, 2011). Past literature demonstrates there is a negative relationship between identity uncertainty and levels of disclosure (e.g. Costa et al., 2013). It is possible that identity disclosure is facilitated by certainty of one's sexual identity. In the current study, this connection may explain why people identifying as gay/lesbian have disclosed their identity more than other identities, as these individuals also report greater certainty in their identity.

Inconsistent with the hypothesis, participants with gay/lesbian identities did not report lower levels of internalised homonegativity when compared to bisexual and non-binary identities. In fact, men identifying as asexual reported lower levels of Internalised Homonegativity than those who identified as gay, bisexual or mostly gay. Asexuality, however, is not widely discussed or researched. Broadly, there is a lack of understanding around this sexual identity. A potential explanation to this finding lies in the focus of heterosexism on same sexuality. As asexuality is defined as a lack of any sexual interest, it is possible people with asexual identities do not identify with heterosexist beliefs and so these beliefs are not meaningful to them. This would mean they are less affected by

heterosexism and are less likely to internalise these beliefs. Future research into this idea is needed.

Another explanation may be more methodological. The construct of internalised homonegativity defined by the LGBIS may not be the manner in which people with asexual identities experience heterosexism. If this is true, the measure would not capture internalised heterosexism in asexual identities, erroneously resulting in the finding people with asexual identities do not experience internalised heterosexism or experience it to a lower degree than people with gay, mostly gay or bisexual identities.

In female participants, women identifying as pansexual reported lower levels of internalised homonegativity when compared to women who identified as questioning. Feinstein, Davila and Yoneda (2012) reported there is a significant relationship between identity confusion and internalised homonegativity. It is possible women identifying as questioning (who express confusion about their identity) are vulnerable to societal messages about same sexuality. These then may be internalised more by those identifying as questioning than other sexual minorities. Belous and Bauman (2016) state pansexuality has become immensely popular in the last decade, appearing in popular culture as celebrities, such as Miley Cyrus, open up about their sexuality. Belous and Bauman also state pansexuality is a part of the anti-label movement. It is possible pansexual identities are affirmed in popular culture, and so this may act as a protective factor buffering the internalisation of sexist beliefs. It is clear more research is needed to gain a better understanding of newer identities, such as asexuality and pansexuality.

Bisexual and gay/lesbian identities did not significantly differ in internalised homonegativity, which is not consistent with past research (e.g. Persson & Pfau, 2015). Past literature however demonstrates inconsistent findings in internalised homonegativity. Some research has supported significant differences in internalised homonegativity between sexual identities, yet others, such as the current study, find no significant differences (Balsam & Mohr, 2007; Costa et al., 2013; Crowell et al., 2015). Belmonte (2011) examined this quantitatively and qualitatively. This study noted higher levels of internalised homonegativity reported by bisexual-identified women, yet through interviews, those identified as lesbian described more engagement in internalised homonegativity, demonstrating inconsistent findings within the study. The lack of a significant difference may exist due to variables not specific to either a bisexual or

lesbian/gay identity, but one that may influence Internalised Homonegativity (Balsam & Mohr, 2007; Ochs, 2007).

The presence of bisexually-identified role models present in the media may provide an alternative explanation. Gomillion and Giuliano (2011) conducted a survey and interviews to investigate how media influences personal attitudes of sexual identity. This study suggested the presence of LGB role models in the media has a positive effect of LGB identity. Ochs (2007) stated there were few bisexual-specific communities/support groups or bisexual role models existing in public. Recently, however, high profile celebrities – such as Cara Delevingne and Demi Lovato - have disclosed non-binary sexual identities, which may have had a positive influence on bisexual identities (Haskell, 2015; Mail Online Reporter, 2014; Murphy, 2015; Vultaggio, 2015). This may have, therefore, mediated or moderated the differences in internalised homonegativity between sexual identities, accounting for the null finding.

The investigation into the remaining sexual identity specific variables had similar predictions. It was expected bisexual and non-binary sexual identities would report more Acceptance Concerns, Concealment Motivation and Difficult Process, and less Identity Affirmation, Identity Superiority and Identity Centrality, as well as more experiences of the Presumption of Heterosexuality when compared to people with gay/lesbian identities. This hypothesis was partially supported. As hypothesised, gay men and lesbian women reported higher levels of Identity Affirmation when compared to non-binary identities, suggesting people with gay/lesbian identities experience more positive attitudes toward their sexual identity than other sexual identities. Little research investigates differences in Identity Affirmation, making it difficult to compare this finding to others. However, Identity Affirmation has been compared to other LGBIS subscales. Moleiro, Pinto and Freire (2013) demonstrated a negative relationship between Identity Affirmation and Identity Uncertainty and Difficult Process. That is, as uncertainty and difficulty experienced in development decrease, identity affirmation increase. It is therefore possible as people with lesbian/gay identities are more certain about their identities, positive attitudes regarding their sexual identity are formed. Surprisingly, women with lesbian identities also reported more difficulty in their developmental process (measured by the difficult process LGBIS subscale) than those identifying with non-binary identities. Based on Moleiro et al. (2013), lesbian identities would have been expected to have lower levels of affirmation due to their difficulty experienced through development. Konik and Stewart

(2004) suggested, however, successfully navigating through the LGBQ+ sexual identity development has a positive influence on global identity. It is possible women who successfully managed difficulty in LGBQ+ sexual identity development have stronger convictions about their identity, nourishing their identity affirmation.

There was not a significant difference in the LGBIS subscale Difficult Process between men identifying with different sexual identities, yet a significant difference in this variable between women identifying with different sexual identities was found. This is inconsistent with past literature (Bregman et al., 2013). It is also inconsistent with the minority stress theory; this would predict bisexual identities would report more Difficult Process because of biphobia, double discrimination (i.e. discrimination from both gay and heterosexual communities) and levels of Identity Uncertainty. Shih, Pittinsky and Ambady (1999) proposed as one's identity becomes more salient to themselves, their performance is altered in the direction of stereotypes. Supporting this, Woodford, Paceley, Kulick and Hong (2015) found identity salience could intensify the effects of proximal microaggressions (defined as heterosexist acts in one's immediate environment). In the current study, women identifying as lesbian report more Identity Centrality than those with non-binary identities, suggesting their sexual identity is more important to them (Dyar, Feinstein & London, 2015). This may make them more vulnerable to external stereotypes, inhibiting their LGBQ+ sexual identity development making it feel more difficult. Furthermore, Baumeister (2000) proposed sociocultural factors have more influence on female sexuality than on male sexuality. Consistent with this, women identifying as lesbian reported more Identity Superiority than women of non-binary identities, yet this disparity was not found in men. Thus, societal beliefs of external stereotypes and negative attitudes may affect women more so than men, and due to higher centrality of their LGBQ+ identity found in women with lesbian identities, it may result in more Difficult Process seen in these women when compared to those with bisexual identities.

Women identifying as questioning reported significantly higher Concealment Motivation when compared with those identifying as mostly lesbian, lesbian and pansexual. This is consistent with research demonstrating a positive relationship between Identity Uncertainty and Concealment Motivation. That is, greater uncertainty in one's sexual identity increases one's Concealment Motivation (Mohr & Kendra, 2011; Moleiro et al., 2013; Schrimshaw, Siegel, Downing & Parsons, 2013). Additionally, women with questioning identities also reported more Acceptance Concerns than those identifying with

bisexual identities. According to Mohr and Kendra (2011), Identity Uncertainty also demonstrates a positive relationship with Acceptance Concerns. Women with questioning identities report more uncertainty than all other sexual identities, including bisexual-identified participants. It is therefore possible this accounts for the disparity between women identifying as questioning and bisexual. Inconsistent with the connection between Identity Uncertainty and Acceptance Concerns, women with bisexual identities reported lower concern for acceptance than those identifying as lesbian. Research has demonstrated women have greater erotic plasticity (i.e. range of physiological reactions from the sexual organs to various stimuli) in their sexuality, and more recently this fluidity has been normalised in the media, as seen by celebrities disclosing their non-binary sexual identities (Baumeister, 2000; Chivers & Timmers, 2012). This may be mediating the level of Acceptance Concerns experienced by these individuals. Due to limited research comparing bisexual and gay/lesbian identities in their experiences with Acceptance Concerns, the above explanation is tentative and requires further research.

The presumption of heterosexuality is a subtle form of heterosexism. It was expected non-binary identities would experience this more than those identifying as gay/lesbian as they are more likely to have opposite sex partners. This was partially supported. In both men and women, heterosexually-identified participants experienced this presumption more than most other sexual identities. In men, those identifying as gay reported less experiences of this presumption than those with bisexual identities, but there were no other significant differences. In women, those identifying as lesbian reported less experiences of the presumption of heterosexuality when compared to those with mostly heterosexual, questioning, bisexual and asexual identities. This suggests men experience similar levels of this presumption, more so than women, potentially indicating men experience greater levels of heterosexism. Another explanation is statistical. The female sample was larger than the male sample and so it is possible smaller effects were found in the female sample solely due to sample size. It is difficult to comment on the consistency of this finding in the literature due to limited previous research. However, further research may benefit from investigating this presumption using more diverse questions in order to see how it affects LGBQ+ individuals on a daily basis.

This research endeavoured to investigate how various identity-specific variables differed between people with different sexual identities. Surprisingly, there was limited research regarding these variables in comparing the sexual identity categories, especially

with identities outside the traditional categories (e.g. those questioning their identity, asexuality and pansexuality). Future research should investigate these differences, rather than assuming they experience identity-related factors in the same manner and intensity as this was not the case in the current study. These dimensions, however, are interconnected, and so hypothetical explanations for the findings can be formed. This discussion demonstrated some dimensions offer a foundation for other dimensions. For example, levels of Identity Uncertainty may be able to offer an underlying explanation for Acceptance Concerns and Concealment Motivation. It is recommended future research should aim to build a hierarchy of identity-dimensions in order to better inform people around the experiences of those defining their identity. The analysis investigating the relationship between these variables and the sexual identity continuum variables generally supported the differences found between the sexual identity categories

Sexual Identity and Psychological Well-being

Past research demonstrated heterosexually-identified individuals report higher levels of psychological well-being when compared to those with LGBQ+ identities. Furthermore, research suggests those with non-binary identities, such as bisexual identities, report lower levels of well-being than individuals with lesbian/gay identities. This research, therefore, predicted bisexual and questioning identities would report the lowest levels of well-being, followed by those with lesbian/gay identities, and heterosexually-identified participants would report the highest level of well-being. This hypothesis was partially supported.

Few significant pairwise differences were found in the male sample, whereas a number of significant comparisons existed in the female sample. This disparity may have been caused by the smaller sample size in male participants, reducing the overall power of the statistical analysis. Most significant differences exist between participants with heterosexual identities and those with bisexual identities. First, heterosexually-identified men and women report lower levels of negative affect when compared to those who identified as bisexual. This finding supports previous research and predictions made by the minority stress theory (Colledge, Hickerson, Reid, & Weatherburn, 2015; Jorm et al., 2002). Second, men identifying as heterosexual and gay report higher levels of positive affect when compared to men with questioning identities. Similarly, heterosexually-identified women report more positive affect, life satisfaction and general happiness, and

less anger when compared to bisexual-identified women. Furthermore, heterosexually-identified women report more positive affect than those with pansexual, questioning, asexual and mostly heterosexual identities, as well as reporting more general happiness than women identifying as pansexual and questioning. Pansexually-identified women also report higher levels of anger when compared with those identifying as heterosexual, lesbian and asexual. Surprisingly, women identified as lesbian and bisexual report higher self-esteem than those with heterosexual identities.

These results are mostly consistent with research which demonstrates that bisexual and other non-binary identities (i.e. questioning, other, pansexual) are more vulnerable to negative outcomes (Bejakovich, 2013; Bostwick et al., 2010; Espelage et al., 2008; Jorm et al., 2002). There are a number of reasons these individuals may have lower levels of well-being, with most explanations citing minority stress theory, factors associated with cognitive dissonance theory and interpersonal congruence theory (Bostwick et al., 2010). Factors such as identity uncertainty and identity disclosure may have played a part in disparities found (Bejakovich, 2013; Mohr & Kendra, 2011). For example, bisexual-identified individuals demonstrated lower levels of psychological well-being, but they also report more Identity Uncertainty and less Identity Disclosure than gay/lesbian identities, which may be negatively impacting their well-being.

Inconsistent with past research, participants with heterosexual identities did not significantly differ from those identifying as gay/lesbian (e.g. Becker et al., 2014; Jorm et al., 2002; Rieger & Savin-Williams, 2012). This inconsistent finding may be a result of the changing social climate. At the time this online survey was available online a number of pro-LGB+ events occurred. The most public of which was the legalisation of same sex marriage in the United States of America. Woodford et al. (2015) demonstrated the presence of same sex marriage law was significantly related to self-esteem, and the presence of anti-LGBQ+ messages were related to anxiety and perceived stress. It would have been expected this change in social climate would have also had positive effects on non-binary identities. Other changes that may have benefitted people with LGBQ+ identities may have been the recent disclosures from celebrities with non-binary identities. More research is, therefore, needed to investigate how the current social climate may be influencing health disparities between sexual identities.

A surprising finding was women with lesbian and bisexual identities reported higher self-esteem than those identified as heterosexual. Research regarding differences in self-esteem between sexual identities is relatively inconsistent, varying between demonstrating significantly lower self-esteem in LGBQ+ identities or not significant at all (Meyer, 2007). No research, to the author's knowledge, has demonstrated LGBQ+ identities report higher levels than heterosexual identities. Rothblum (2002) suggested women with lesbian identities may be more critical of societal attitudes than heterosexually-identified women, which may act as a buffer for self-esteem. This may also apply to women identifying as bisexual, although this was not mentioned in the article. Another potential explanation may be in-group bias. Research reveals in-group bias is associated with higher self-esteem, and women report higher in-group bias than men (Rudman & Goodwin, 2004; Aberson, Healy & Romero, 2000). This may explain why a significant difference is found in women but not men, yet does not explain how this affects the differences found. Women with lesbian identities report Identity Superiority, which may suggest they exhibit more in-group bias, resulting in higher self-esteem. These results may also have been affected by level of acceptance reported by participants. Ryan, Russell, Huebner, Diaz and Sanchez (2010) found level of acceptance can act as a buffer, and in their study it protected the self-esteem of their participants. In the current research, 53% reported their environment is accepting and/or supportive, and less than 10% reported a rejecting environment. Due to the novelty of this finding these explanations are all tentative and require further research. Additionally, this finding disappeared when controlling for identity specific factors suggesting some factors were positively affecting self-esteem in LGBQ+ identities. Future research should investigate how identity-specific factors positively affect psychological well-being.

Endeavouring to incorporate continuum-approaches in research assessing differences in psychological well-being, this research assessed whether same sexuality experiences and sexual flexibility were associated with the variables of well-being. It was expected same sexuality experiences and sexual flexibility (i.e. SOR) would be negatively associated with psychological well-being. There was limited support for this hypothesis, as few significant associations were found and these produced small effect sizes. This finding is inconsistent with most past research (e.g. Jager & Davis-Kean, 2011). However, the results are partially consistent with Rivers and Noret (2008) and Bos, Sanfort, Bruyn, and Hakvoort (2008). Consistent with Bos et al., there was a positive relationship between

negative affect and same sex attractions and fantasises and SOR, but few other well-being variables. Once again, the normalisation of same sexuality in media and movement for LGBQ+ rights in the world may have benefited those experiencing same sexuality. The significant finding of negative affect may highlight the segregation between mental ill health and well-being. Consistent with Rivers and Noret (2008), same sexuality in women was positively associated with anger, suggesting as the level of same sexuality increases so does the level of reported anger. This may be associated with Rothblum's (2002) claim women with lesbian identities reported more critical views about society than heterosexually-identified women. Further research is needed which connects sexual identity and its components with identity-specific factors to help explain discrepancies between studies.

It is important to understand how factors associated with sexual identity affect the differences in psychological well-being between people with different sexual identities. For this reason, the current research examined what happened to the differences in well-being when controlling for the sexual identity-specific dimensions. The study predicted these significant differences would be eliminated once controlling for identity-specific dimensions. This hypothesis was partially supported. Four of the nine previously significant differences were found to be non-significant. Of the five remaining significant findings, four demonstrated reduced effect sizes. Post hoc analyses demonstrated few significant pairwise comparisons, including one in male participants and two in female participants.

In male participants, men with heterosexual identities reported more life satisfaction than men identifying as gay or other. Furthermore, men identifying as asexual reported more life satisfaction than those identified as other. Surprisingly, the effect size of this analysis increased. That is, the disparities were increased rather than decreased by controlling for identity-related factors. This finding suggests identity-specific dimensions that have a positive influence on well-being, such as identity disclosure, outweigh those which would have negatively influenced the psychological outcomes. The buffering effects of various identity-specific variables, such as identity disclosure, have been supported (Kosciw, Greytak, Bartkiewicz, Boesen & Palmer, 2012; Koh & Ross, 2006). This also suggests there are other variables impacting the well-being of gay men. Therefore, once controlling for protective factors extraneous variables are no longer buffered, and the disparities increase. According to Meyer (2003), external stressors, such as discrimination,

may create disparities between heterosexual and LGBQ+ identities. However, these were not investigated in this research. Katz-Wise and Hyde (2012) reviewed victimisation experiences in people with LGBQ+ identities, concluding a substantial number of these individuals experience some form of victimisation, ranging from harassment to violence and discrimination. Furthermore, the review concluded men with LGBQ+ identities experience higher rates of victimisation when compared to women with these identities. Therefore, it is possible to attribute this decrease in life satisfaction, when controlling for identity-related factors, to external stressors. Once removing positive identity dimensions, such as disclosure and certainty in one's identity, there were no buffers for external stressors, such as victimisation, resulting in a greater disparity between men identifying as heterosexual and those with gay identities. Future research should investigate what internal factors have a protective influence over well-being, and how they mediate the effect of external stressors.

In the female sample, pairwise comparisons demonstrated women with heterosexual identities reported more positive affect when compared with those identifying as mostly heterosexual, as well as reporting more life satisfaction than those identifying as other. These new differences are difficult to explain due to the limited research surrounding the differences in the sexual identity categories. It is possible, like the difference found in the male sample, that once controlling for the sexual identity specific variable other factors (not studied in this research) were no longer being buffered and so influenced the differences in psychological well-being for people identifying with these sexual identity categories. The finding that those identifying as mostly heterosexual report lower positive affect than heterosexually-identified individuals is, however, consistent with research such as Jager and Davis-Kean (2011) which highlight vulnerability for people with heterosexual identities that express same sex interest. Further research is required into variables that affect disparities, both in the traditional categories and in new more diverse categories.

The findings demonstrated partial support for the hypothesis as non-binary identities such as bisexual or questioning, were found to have lower levels of psychological well-being than heterosexual identities. There were, however, no significant differences between heterosexual and lesbian/gay identities. This lack of difference may indicate a shift in the societal climate, reducing the disparities between sexual identities. The conservative post hoc analyses may also have contributed to this finding. In any case, when

controlling for identity-related factors, all but one finding demonstrated a decrease in effect size, suggesting dimensions of identity play a role in the disparities in psychological outcomes between sexual identities. In male participants, however, when controlling for these dimensions in the analysis of differences in life satisfaction, the effect size of this significant finding increased. It is possible some dimensions of sexual identity, such as identity disclosure, have a protective function against external stressors. Thus, when controlling for these protective factors the disparities in life satisfaction are intensified. Future research should examine how identity-related factors interact with external stressors to influence the psychological outcomes of people with various sexual identities, especially in people with more recently described identity labels, such as pansexuality.

Sexual Identity Development, Identity-Specific Dimensions and Psychological Well-being

Past research has proposed LGBQ+ sexual identity development has a beneficial influence on psychological well-being. Studies investigating how each stage or phase of development influences well-being has supported that the ‘final’ stage or phase of development (i.e. the integration of one’s sexual identity into their identity as a whole) has a positive effect on psychological outcomes. There is inconsistency on the differences in well-being across the remaining parts of development. For this reason, this research focused on what differences in psychological well-being existed between people in different phases of individual and group developmental branches. People in the Synthesis phase of development (in either individual or group branches) were predicted to report significantly higher levels of psychological well-being. This hypothesis was generally supported by the findings, which demonstrated all, except three, analyses were significant. Post hoc analysis demonstrated men and women in the Synthesis phase reported higher levels of positive affect, life satisfaction and self-esteem, and lower levels of negative affect than other phases of development. Most often this significant difference was seen between participants in the Synthesis and those in the Awareness phases. This finding is consistent with previous investigations of the relationship between psychological well-being and progression through development (Swann & Spivey, 2004). The Synthesis phase of development is where the individual has made decisions about their identity and has reached a place of self-acceptance and stability. They have decided what their identity means to them and how they will present it in public (McCarn & Fassinger, 1996). This

clarity may result in the reduction or dissipation of dissonance, and allows the individual to move forward with their decisions.

The only non-significant findings existed in differences in self-esteem and general happiness between men of different phases of individual development. This finding is not consistent with past literature (Halpin & Allen, 2004). Inconsistent findings within the literature investigating self-esteem are not uncommon (e.g. Balsam, Beauchaine, Mickey & Rothblum, 2005; Rowen & Malcom, 2002; Woodford et al., 2015). Self-esteem is a complex construct, and so it is likely to be multi-factorial. It is possible self-esteem is impacted by factors that are not associated with individual identity development or there may be a small effect. For example, family acceptance has been associated with higher self-esteem in LGB+ identities (Ryan et al., 2010). It is possible at an individual level male participants feel accepted by their environment (44% reported accepting and/or supportive environments), and so this buffers differences in self-esteem. This acceptance may also act as a protective factor, resulting in a non-significant difference in general happiness.

The differences in anger between men in different phases of group developmental branch were also not found to be significant. Milovchevich, Howells, Drew and Day (2001) stated that masculine identities tend to be more prone to anger, more likely to externally express it and less likely to control that expression. Potentially, men in general express similar levels of anger despite their phase in development. There is surprisingly little research on experienced anger in minority populations in comparison to majority populations, especially in LGBQ+ populations. Langridge (2008) questions whether “successful” development should end with contentment or is it more appropriate that identity development is deemed successful as the individual realises their anger toward the heterosexism that still exists in society. If Langridge is correct, the lack of a significant difference may be a changing of the direction of the anger rather than a change in the reported level of anger. However, if this is the case then this questions why significant differences in anger were not seen in the female sample and in men in differing phases of individual development. Future research should explore levels of experienced anger in people with LGBQ+ identities, and other minority statuses, and how it transforms during identity development.

The developmental process involves many obstacles, such as those measured by the LGBIS (e.g. Identity Uncertainty). When individuals progress to the Synthesis phase, they

theoretically reach a point where they have worked through these obstacles (McCarn & Fassinger, 1996). Inspired by this, people in the Synthesis phase were predicted to have higher levels of Identity Superiority, Identity Centrality, and Identity Disclosure, whereas those in earlier phases were expected to report higher levels of Acceptance Concerns, Concealment Motivation, Identity Uncertainty, Internalised Homonegativity, Difficult Process, and the Presumption of Heterosexuality. This hypothesis was partially supported by this research. Three quarters of the analyses demonstrated significant differences in identity-specific variables between people in different phases of development. Post hoc analysis demonstrated most significant pairwise comparisons occurred in the hypothesised manner between people in the Synthesis phase and those in the Awareness phase of development. The remaining post hoc comparisons, however, revealed significant differences between people in the Synthesis phase and those in the Exploration or Commitment phases, or between people in the Awareness or Exploration phases and those in the Commitment phases. These post hoc analyses reveal people in later phases of development report more positive identity factors, such as Identity Disclosure and Identity Affirmation, and less negative identity factors, such as Identity Uncertainty and Internalised Homonegativity. This supports McCarn and Fassinger's claim that the Synthesis phase - characterised by the integration of one's self-defined sexual identity into their global identity – is associated with management of obstacles related to their sexual identity.

The analyses which were found non-significant, include: differences in Difficult Process in male developmental branches; differences in Identity Superiority in male and female individual developmental phases and in male group developmental phases; differences in Identity Centrality in men and women between phases of group development; differences in Identity Disclosure in men between phase of group development; and differences in the Presumption of Heterosexuality in men between both individual and group developmental phases. Mohr and Kendra (2011) describe Identity Superiority as viewing people with LGBQ+ identities more favourably than those with heterosexual identities. The group developmental branch is defined as a process defining how the person views their social identity in reference to LGB+ people and their community. The individual developmental branch, on the other hand, describes exploration and definition of self identity, not focusing on others (McCarn & Fassinger, 1996). It is therefore possible Identity Superiority is important to group identity rather than individual

(or personal) identity, which would explain the significant finding in phases of female group developmental branch. A potential explanation why this finding was not seen in the male sample may be that Identity Superiority may have a small effect size, which is not seen due to the lower sample size in male samples. In contrast, Identity Centrality may have more association with individual identity than group identity. Mohr and Kendra (2011) support this idea as they define “the degree to which an aspect of a person's identity (e.g., sexual orientation, racial, vocational) is central to her or his overall identity” (pp. 235). Limited research is present for these variables, and so it is difficult to comment on these findings. Future research should aim to investigate what differences exist between phases of development regarding sexual-identity specific variables, including LGBIS subscales.

Past research has shown successfully moving through development to the ‘final’ phase can strengthen global identity (Konik & Stewart, 2004). It is, therefore, possible working through obstacles and reaching a point of stability and coherence has a beneficial influence on well-being, as was previously thought. This is not to say the remaining phases have a negative effect on well-being. McCarn and Fassinger (1996) suggested less integrated phases of development (i.e. all, but the Synthesis phase) may be filled with positive emotions, such as excitement, as they are discovering more about themselves and where they fit in the community. These phases, however, also come with many challenges, such as learning about the oppression felt by those identifying with a LBGQ+ identity. These difficulties are likely to have a negative impact on psychological outcomes, explaining the lower levels of well-being seen in the findings. Controlling for these difficulties, therefore, was predicted to eliminate the significant differences found between phases of development. This hypothesis was generally supported, with only four of the 21 analyses remaining significant. Of these, three analyses (including examining differences in negative affect, anger and general happiness between female individual phases, and female group developmental phases, respectively) demonstrated reduced effect sizes. The post hoc analysis of these results demonstrated women in the Synthesis phase report lower anger and more happiness than those in the Commitment phase. To the author’s knowledge, there is currently no other research which takes into account identity dimensions in the analysis of differences in psychological well-being between people in different phases of LBGQ+ sexual identity development. It is, therefore, difficult to comment as to whether this is consistent with previous findings. This finding, however, is

consistent with prediction made by minority stress theory, suggesting the negative effect of sexual identity-specific variables may be accounting for well-being disparities between phases of development.

The effect size of one analysis, surprisingly, increased after controlling for identity-specific variables. Inconsistent with the hypothesis, the effect size of the analysis examining the differences in self-esteem between men in different group developmental phases increased. Post hoc analysis demonstrated men in the Exploration phase reported lower self-esteem than those in all other phases of development. The Exploration phase of group identity development is thought to be associated with the attainment of knowledge and attitudes surrounding LGB+ people and the community (McCarn & Fassinger, 1996). It is possible people in this phase are exposed to more instances of and may be more vulnerable to heterosexism (not examined by this research) during their exploration. Therefore, when controlling for identity-specific factors, the buffering effects of positive identity factors, such as identity affirmation, the effects of uncontrolled variables, such as external heterosexism, are more evident. Future research need to continue investigation regarding how sexual identity-related factors, such as Identity Affirmation and Identity Uncertainty, influence the differences in well-being demonstrated between people in different phases of development.

Strengths, Weaknesses and Future Directions for Research

The main strengths of this research lie in its' novelty. Surprisingly little investigation has examined how dimensions associated with sexual identity actually differ between people with different sexual identities and in different phases of individual and group identity development. Furthermore, many authors' state likely experiences undergone through development, which may have an impact on psychological well-being, yet few have investigated whether their assertions are supported by research. This study not only explored how sexual identity-related variables differed between identities and phases of development, but also examined how these variables affected the differences in psychological well-being between these identities and phases. Another novel aspect of this research was its extension of the sexual identity categories, including mostly heterosexual, mostly gay/lesbian, other, questioning, pansexual and asexual. This demonstrated a greater respect for diversity, while also providing much needed research into the newly emerging self-reported identities.

Despite this novelty, this study is not without its limitations. Ethnicity was not recorded in this research. The decision to ask participants where they were born and currently reside in was two-fold. The aim of the recruitment process was to gain a large sample, which included participants from many countries. Attempting to create a universal list of ethnicities to be inclusive of a worldwide sample was arduous. Additionally, the comparison between the attitudes of the country one was born in and where one currently resides was more meaningful to analysis than a list of ethnicities. Despite this, including a question of ethnicity could have been included in addition to the county born in and live in. In hindsight, participants could have been offered an open-text response box to write in their ethnicity, and this could have been re-coded according to common ethnicities. The problem with this method is the potential plethora of self-identified ethnicities, and making errors in re-coding if the researcher was not familiar with the ethnicities mentioned or implicit biases may affect the re-coded ethnicities. Creating a method of analysing ethnicity in international samples is a laborious process. Future research, however, should aim to include ethnicity in combination with other assessments of location-based demographics. This would allow more comparison with samples of other research, as well as providing the opportunity to examine the association between cultural and ethnic values and attitudes toward same sexuality.

This research predominately focussed on internal stressors, and how these influence the differences in psychological well-being between sexual identities, and their development. This provided greater understanding in the disparities between sexual identities. Nevertheless, future research should investigate these in combination with external factors, such as experiences with heterosexism, to gain more information surrounding these disparities. For example, once controlling for internal stressors, the differences in life satisfaction between sexual identities became larger. This may have been because some identity-related factors held protective effects, and so controlling for these resulted in more apparent influence of other stressors, such as heterosexism. Additionally, heterosexually- and mostly heterosexually-identified participants did not complete the questionnaires investigating identity-related factors as these were developed for those with LGBQ+ identities. It is presumptuous to assume heterosexual and mostly heterosexual identities do not experience identity uncertainty or identity superiority, albeit they may experience these to a lesser degree than those with LGBQ+ identities. Exploring these in future research would allow better comparisons to be made between the sexual identities,

and would provide better understandings about the experiences of these identities. Additionally, future research should examine heterosexual identity formation, in addition to LGBQ+ identity formation. Dillon et al. (2011) describe a universal model of sexual identity formation based on the McCarn and Fassinger (1996) model. This would also allow for better comparisons to be made between heterosexual and LGBQ+ identities, providing a better understanding of the disparities between people with these identities and their experiences.

Another methodological issue present in this research was its utilisation of computer-based recruitment and data collection. This may exclude those that do not have a computer, tablet or smart phone. Current estimates suggest 72% of New Zealanders have access or have a computer and 70% own a smart phone (Research New Zealand, 2015). While this is high, it suggests the study may have missed approximately 28% of people in New Zealand. This estimate may be higher in developing countries. Another reason people may not have access to this online survey is due to homelessness. According to Amore (2016), one in 100 people in New Zealand were homeless in the 2013 consensus. This is especially important as it is estimated 20 – 40% of homeless people under the age of 25 identify as lesbian, gay, bisexual, transgender, queer or intersex (Lee, 2015). It is, therefore, possible this study missed an important group of people with LGBQ+ identities, which may have greatly affected the results. Despite these limitations, web-based surveys have many strengths such as having the ability to access unique, hard to reach populations (such as LGBQ+ individuals), as well as being time and cost efficient (Wright, 2005). Future research should, however, utilise a multi-method approach to participant recruitment and data collection, such as offering pen and paper versions of the survey, and recruiting specifically for hard to reach groups, such as recruiting in homeless shelters.

The recruitment of the sample potentially biased the types of participants in the sample. The study contacted social media pages where the main subscribers were people who identified with LGBQ+ identities. It is likely recruiting from these pages was likely to get participants who were further in their identity development, as well as those who are more likely to have disclosed their identity and are more sure about their identity (among other factors), than more general social media pages. Future research may benefit from randomly selecting social media pages for recruitment. This study also emailed professors/senior lecturers and institutions from English speaking countries, which was likely to limit the recruitment of participants from countries not dominated by Western

perspectives, limiting the cross-cultural applicability of the study. Future research should endeavour to sample countries which do not subscribe to Western ideals. Finally, it is possible the information sheet deterred people who were unsure of their sexual identity or felt psychologically unwell by outlining the study in detail. Therefore, it is possible these factors biased the final sample. Despite these limitations, Khatri et al. (2015) listed several advantages of internet-based recruitment, including being an easy to use medium, allowing rapid dissemination of the survey, and expanding ability to recruit diverse and hidden samples. Furthermore, Temple and Brown (2011) concluded with a multi-pronged approach is utilised (such as the current study) internet sampling can be effective, especially in reaching hidden populations such as people with LGBQ+ identities.

Sexual identity is not a construct to be placed in rigid boxes. As time goes on new labels have emerged and are slowly being incorporated in the research. Although the continuum conceptualisation of sexual identity has been around since the time of Kinsey et al. (1948), this approach is not used commonly in research. This study demonstrated the continuum approach can differentiate the newly emerging identities. Future research should incorporate emotional and romantic attractions in the assessment of the continuum, as well as attractions toward those with non-binary genders (e.g. transgender).

This study also demonstrated people with different sexual identities have common experiences, but the manner and intensity these experiences are felt vary between identities. Documenting the varied experiences can help clinicians and other individuals target areas influencing well-being. Future research should explore the manner in which those with heterosexual and mostly heterosexual identities experience these dimensions, and compare them with people identifying with LGBQ+ identities. Understanding factors that influence the various identities helps explain the psychological disparities, which exist in the literature. Examining the differences in sexual identities demonstrate non-binary identities, such as bisexual or questioning, are more vulnerable to lower psychological well-being. Taking into account the dimensions associated with these disparities reduces the differences, but also showed that there may be some protective factors of these dimensions, buffering the influence of external stressors.

Differences in psychological well-being also exist between people in different phases of development, revealing integrating one's sexual identity into global identity is associated with higher levels of psychological well-being. As proposed in McCarn and

Fassinger's (1996) LGBQ+ identity developmental model, and various authors such as Diamond (2006), sexual identities are not fixed states. Rather they can change over time with new contexts and relationships, and so people may re-enter sexual identity development a number of times throughout the lifespan. Therefore, it is important to understand the differences in well-being seen between phases of development, and how these differences are moderated or mediated by specific factors. Once again, taking identity-related factors into consideration reduces or eliminates these differences. It also suggests, once considering these factors, those early in sexual identity development (i.e. becoming aware of their difference) have higher psychological well-being than those exploring their identity. The literature has suggested that 'ignorance is bliss' and not understanding the struggles people with LGBQ+ identities face has a beneficial effect on well-being. Future research should explore the role of external stressors in these findings. Understanding how dimensions related to one's sexual identity vary between people with different identities can help clinicians and researchers gain a better idea of the experiences of people with LGBQ+ identities. Additionally, understanding their development and how this relates to their psychological well-being would also allow targeted interventions to help alleviate the psychological disparities found between those with heterosexual and LGBQ+ identities. Nathaniel Brandon (as cited in Haraburda, 2010) stated "The first step toward change is awareness" (p. 16). This study has raised awareness on the influences of identity-related factors, sexual identity and its' development in the psychological disparities which exist for people with LGBQ+ identities. Moving forward with acceptance and awareness are the way to create beneficial change for these individuals.

Researcher Reflections

This thesis was born out of my own experiences and the portrayal of the LGBQ+ community in media. Upon reading Mrs King-Millar's article in Cosmo I found myself relating with her points, and wondering how it affects others identifying as LGBQ+. Each day, every new context and each new person I meet I have a decision to make: do I correct them when they assume my partner is a man and risk some backlash, judgement or – in the least – and awkward lull in the conversation before an awkward apology? Alternatively, do I simply use unisex pronouns and ignore assumptions made by others?

Another question I ask myself is how does this new knowledge affect the way people treat me? While society is becoming more progressive and supporting – at least

overtly – I wonder what biases exist behind closed doors. Recently, my partner and I were denied a rental property that everyone said we would be accepted for as we were the ideal tenants – young professional couple with no pets or children. While this may not have been an act of heterosexism, my consideration that it may have been is an example of the expectancy of bias (defined by Meyer, 2003). Those who are in a heterosexual relationship are unlikely to wonder this was why their application was denied.

Therefore, in the initial stages of my doctorate, I wondered does this affect my well-being. What about those still figuring themselves out? Are they more vulnerable than me, someone comfortable and stable in who I am? How does this affect their development? Therefore, like any academic I tried to find previous research. To my surprise, while there were variables hypothesised to explain well-being disparities between stages/phases of development, there was not research examining it. This is where my research began.

What I was really interested in was LGBQ+ identity development and what factors are associated with well-being during this time. Surely if there were no specific variables associated with it, LGBQ+ identity development would not be so difficult for people. Looking back on my own experience, I remember not wanting to be gay, and being confused, wanting to be able to label my experience so I could understand it. I remember not having any visible role models. I was lucky that my friend was also having some same sex attractions, which made my experience better, in a way normalising it a little bit. If I was accepting her for having these experiences how could I not accept myself? I really do not know how my developmental pathway would have gone if I did not have someone going through the same thing. I had all these experiences, and my parents and brother were liberal and arguing against prejudice. I could have only imagined what this experience would have been like if I was raised in a different environment. Researching into development labelled some of my previous experiences: identity confusion, internalised heterosexism, homonormativity (i.e. the lack of visible role models), concerns for acceptances, concealment motivation, and identity disclosure. So if this was my experience, how was it for other people? This is where my experiences resulted in an interest in exploring how these factors affect development and well-being.

While it was difficult to narrow down what affects development and well-being, the variables I chose were associated to my own experiences and those demonstrated in media, such as identity confusion and acceptance. To be honest, some of what I found was

unexpected. How could the daily presumption of heterosexuality not affect well-being? As a researcher, I consider I may not have asked the right question. Maybe changing how I asked about heteronormativity may have resulted in a different result, or maybe the statistical analyses were too critical resulting in null findings. As a clinician, I wonder what resilience exists or is this experience a part of the status quo, and so it does not affect people. If so, would it be beneficial for clients with LGBQ+ identities to challenge heteronormativity. I was also surprised at finding that gay/lesbian identities did not differ in well-being when compared to heterosexual identities. It makes me curious if this was a methodological/analytical error or if societal changes are starting to positively influence people with LGBQ+ identities.

What I really wanted out of my research was answers. Why was LGBQ+ identity development so difficult? As a future clinical psychologist, what does the research (not just my own experience) say people should watch out for in LGBQ+ identity development? What factors do we need to address, both in society and within individuals, to improve the well-being of people with LGBQ+ identities? These are just some questions I had. From my research, I have had some answers to my questions, but (as is usual in research) so many more questions have arisen. My take home messages are: LGBQ+ identities are associated with specific stressors due to historical and cultural factors; and if we address these stressors, we can influence the lives of LGBQ+ people. Changes can be made in a number of areas, whether in the role of a researcher, a clinician, an activist or in our everyday lives. We can make incremental changes, which will result in gradual improvements.

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Appendix

Appendix A: Advertising Materials

Facebook Messages

Conversation started 4 May

 **Tamara Bejakovich** 04/05/2015 15:43
Hi there

My name is Tamara Bejakovich and I am a doctoral student at Massey University in New Zealand. I am researching the relationship between sexual identity development and psychological well-being. I was wondering if you would be willing to post my online survey on your facebook page?

Thank you
Tamara

22 May

Facebook Post

 **Research: All sexual identities and well-being** 18 May · 
Hi guys!
For all those who haven't had a chance yet to take my survey I've placed the link below.
https://jfe.qualtrics.com/form/SV_bDar6WLY95XJQzj
A reminder this survey is for ANYONE over the age of 16. My research is looking at the connection between various sexual identities (including straight or questioning, among others) and psychological well-being (e.g. happiness). Taking my survey and sharing it with friends and family will help me so much with my doctorate and I will be so grateful.
Thank you all so much!!!!

9,348 people reached 

 Like  Comment  Share

Twitter Message

Hi, I'm Tamara and doing my doctoral at Massey Uni, NZ, researching sexual identity and psych wellbeing. Could you please share my survey?

Would be so grateful! Here is the link, please check it out
jasiasingleuser.asia.qualtrics.com/SE/?SID=SV_bDa...

....
Thank you!



Apr 26



Send

Twitter Post

Tweets Tweets & replies Photos & videos

Pinned Tweet



BejakovichResearch @Research_Bejak · May 3

Over 16? Take the time to do my survey =)
jfe.qualtrics.com/form/SV_bDar6W...

#LGBT #gay #sexuality #identity #bisexual
#lesbian #research #survey



...

Forum Post Example

10 replies to this topic

Steph #1
Posted 04 August 2015 - 06:23 PM

The Emerald Asexual • Project Team
Gender: Agender
Profession: Any All
Location: Beacon Academy
Asexuality: Aromantic
Asexual (Cupidsexual)

Hi there,
My name is Tamara Bejakovich and I am a student at Massey University, Palmerston North, New Zealand. I am currently studying toward a Doctorate in Clinical Psychology, with a research focus on sexual identity and psychological well-being.

What's your sexual identity? How did you figure that out?

All individuals form a sexual identity. For some this is a relatively straightforward process while for others it can be quite challenging. I am interested in how people come to understand their own sexual identity and I would like to learn more about how a straight and a non-straight sexual identity is related to psychological factors, such as life satisfaction and happiness. My research revolves around this, and could use your help to spread the word.

What's the purpose?
My research aims to investigate how sexual identity and its development influence an individual's general psychological well-being, through the use of an online survey. It will look into a number of factors, such as heterosexism, positive identities and acceptance.

Who can participate?
In an interest of increasing the application of the research, I am interested in having participants from all walks of life and all sexual identities. The greater the diversity, the better!

What would I appreciate from you?
This email is to advertise the online survey to as many different individuals as possible. I would be very grateful if you would be able to pass on the survey to anyone who may participate, such as colleagues, students, friends and family.

If you have any questions, please feel free to contact me on bejakovichresearch@gmail.com.

Additionally, I have included the web address for the survey, the Massey Survey page and the Facebook page, which will have access to the survey through a link on a Facebook status.
Web address (Survey): https://qasiasindeluser.asia.qualtrics.com/SE/?SID=SV_bDaroWLV85UJz
Facebook: <https://www.facebook.com/groups/ResearchAllSexual-identities-and-well-being/822318884498827>

Thank you so much for your time and support,
Tamara Bejakovich.

My supervisor is Associate Professor Ross Flett. He can be contacted at: R.A.Flett@massey.ac.nz
His Massey profile can be viewed at: <http://www.massey.ac.nz/massey/expertise/profile.cfm?strref=955130>

This survey/study has been approved for posting by the AVEN Project Team.

Email to Organisations and Institutions

Dear [Organisation/Name]

My name is Tamara Bejakovich and I am a student at Massey University, Palmerston North, New Zealand. I am currently studying toward a Doctorate in Clinical Psychology, with a research focus on sexual identity and psychological well-being.

What is your sexual identity? How did you figure that out?

All individuals form a sexual identity. For some this is a relatively straightforward process while for others it can be quite challenging. I am interested in how people come to understand their own sexual identity and I would like to learn more about how a straight and a non-straight sexual identity is related to psychological factors, such as life satisfaction and happiness. My research revolves around this, and could use your help to spread the word.

What's the purpose?

My research aims to investigate how sexual identity and its development influence an individual's general psychological well-being, through the use of an online survey. It will look into a number of factors, such as heterosexism, positive identities and acceptance.

Who can participate?

In an interest of increasing the application of the research, I am interested in having participants from all walks of life and all sexual identities. The greater the diversity, the better!

What would I appreciate from you?

This email is to advertise the online survey to as many different individuals as possible. I would be very grateful if you would be able to pass on the survey to anyone who may participate, such as colleagues, students, friends and family.

If you have any questions, please feel free to contact me on bejakovichresearch@gmail.com.

Additionally, I have included the web address for the survey, the Massey Survey page and the Facebook page, which will have access to the survey through a link on a Facebook status.

Web address: https://qasiasingleuser.asia.qualtrics.com/SE/?SID=SV_bDar6WLY95XJQzj

Massey Survey Page: <http://www.massey.ac.nz/massey/learning/departments/school-of-psychology/research/online-surveys-and-results.cfm>

Facebook: <https://www.facebook.com/pages/Research-All-sexual-identities-and-well-being/822318664496627>

Thank you so much for your time and support,

Tamara Bejakovich.

My supervisor is Associate Professor Ross Flett. He can be contacted at: R.A.Flett@massey.ac.nz

His Massey profile can be viewed at:
<http://www.massey.ac.nz/massey/expertise/profile.cfm?stref=055130>

Appendix B: Online Survey

DEMOGRAPHICS

- 1. Please specify your Age: AGE GROUPS**
- 2. Please specify your Gender:**
 - Male
 - Female
 - Other; please specify
- 3. What country were you born in?**
- 4. What country do you live in?**
- 5. Which best describes your religious beliefs?**
 - Atheist Spiritual but not religious
 - Religious
 - Buddhist
 - Christian (including Catholic, Protestant and all other Christian denominations)
 - Hindu
 - Islam/Muslim
 - Judaism/Jewish
 - Other; Please specify

RCI-10 Religious Commitment Inventory-10

Instructions: Read each of the following statements. Using the scale to the right, CIRCLE the response that best describes how true each statement is for you.

Not at all true of me	Somewhat true of me	Moderately true of me	Mostly true of me	Totally true of me
1	2	3	4	5

1. I often read books and magazines about my faith.
2. I make financial contributions to my religious organization.
3. I spend time trying to grow in understanding of my faith.
4. Religion is especially important to me because it answers many questions about the meaning of life.
5. My religious beliefs lie behind my whole approach to life.
6. I enjoy spending time with others of my religious affiliation.
7. Religious beliefs influence all my dealings in life.
8. It is important to me to spend periods of time in private religious thought and reflection.
9. I enjoy working in the activities of my religious affiliation.
10. I keep well informed about my local religious group and have some influence in its decisions.

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

- 6.
- 7. Which best describes your Religion's attitude (e.g. Catholic) toward sexual orientation?**
 - Rejecting of same-sex attractions, behaviours and fantasies

- Aren't rejecting, but do not like the idea of same-sex attractions, behaviours and fantasies
- Aren't supportive or rejecting (i.e. are indifferent) of same-sex attractions, behaviours and fantasies
- Aren't supportive, but are accepting of same-sex attractions, behaviours and fantasies
- Supportive and accepting of same-sex attractions, behaviours and fantasies

8. Which best describes the attitude of your social circle toward sexual orientation?

- Rejecting of same-sex attractions, behaviours and fantasies
- Aren't rejecting, but do not like the idea of same-sex attractions, behaviours and fantasies
- Aren't supportive or rejecting (i.e. are indifferent) of same-sex attractions, behaviours and fantasies
- Aren't supportive, but are accepting of same-sex attractions, behaviours and fantasies
- Supportive and accepting of same-sex attractions, behaviours and fantasies

9. Which do you think best describes your personal attitudes and beliefs toward sexual orientation?

- I am rejecting of same-sex attractions, behaviours and fantasies
- I am not rejecting, but do not like the idea of same-sex attractions, behaviours and fantasies
- I am not supportive or rejecting (i.e. am indifferent) of same-sex attractions, behaviours and fantasies
- I am not supportive, but am accepting of same-sex attractions, behaviours and fantasies
- I am supportive and accepting of same-sex attractions, behaviours and fantasies

10. What is your highest level of achievement in education?

- Primary school
- High School
- Diploma/Certificate at University or Polytechnic level or another post secondary education institution or Pre-Bachelor degree
- Bachelor Degree
- Honours or Masters or Specialist Degrees
- PhD, or other doctoral programmes

11. Which best describes the area that you live in?

- Rural area (*up to a population of 1,000, dispersed over a large area*)
- Village or Small town (*from a population of 1,000 to 20,000; for example Lincoln, NZ and Rolleston, NZ are towns*)
- Metropolitan area/City (*at least a population of 20,000, or an area with high population density and which has local businesses and trading; for example, Palmerston North, Christchurch, New York and LA are cities*)

12. Which do you think best describes the attitude of the rural area, small town or city that you live in toward LGB and same-sex experiences?

- Rejecting of same-sex attractions, behaviours and fantasies
- Aren't rejecting, but do not like the idea of same-sex attractions, behaviours and fantasies
- Aren't supportive or rejecting (i.e. are indifferent) of same-sex attractions, behaviours and fantasies
- Aren't supportive, but are accepting of same-sex attractions, behaviours and fantasies
- Supportive and accepting of same-sex attractions, behaviours and fantasies

13. Which of the following best describes your sexual identity?

- Straight
- Mostly Straight
- Bisexual
- Mostly Gay or Lesbian
- Lesbian or Gay
- Questioning (Still figuring out how to best describe your feelings, attractions and thoughts)
- Other; please specify

14. On a scale of 0 to 10, please indicate how certain you are of your sexual orientation?

0 (not at all certain) _____ 10 (extremely certain)

How often do people assume you are 100% straight?

- Not at all
- Occasionally
- Some of the time
- Often
- All of the time

15. How often do you feel structures such as medical services, social services, education institutional and/or recreational services and institutions presume you are 100% straight?

- Not at all
- Occasionally
- Some of the time
- Often
- All of the time

EPSTEIN SEXUAL ORIENTATION INVENTORY

Instructions: All participants will be asked to complete this questionnaire, no matter what their answer was in reference to their sexual orientation.

Same-sex interactions

1. **Have you ever felt sexually attracted to a member of the same sex?** No, Yes
2. **How strongly are you attracted to members of the same sex?** Not at all, moderately, Very strongly
3. **Have you ever had a dream about a sexual encounter with a member of the same sex?** No, Yes
4. **Have you ever had a waking fantasy about a sexual encounter with a member of the same sex?** No, Yes
5. **Have you ever felt sexually aroused when you've had any exposure to two people of your same gender having a sexual encounter (through gossip, a video, or some other means)?** No, Yes
6. **Have you ever voluntarily had sexual contact (such as kissing or petting) with a member of the same sex?** No, Yes
7. **Would you be willing to have sexual relations with someone of the same sex?** No, Maybe, Yes
8. **How frequent are your same-sex fantasies or dreams?** Never have them, rare/occasional, frequent
9. **How frequent are your same-sex encounters?** Never have them, rare/occasional, frequent

Opposite-sex interactions

10. **Have you ever felt sexually attracted to a member of the opposite sex?** No, Yes
11. **How strongly are you attracted to members of the opposite sex?** Not at all, Moderately, Very strongly
12. **Have you ever had a dream about a sexual encounter with a member of the opposite sex?** No, Yes
13. **Have you ever had a waking fantasy about a sexual encounter with a member of the opposite sex?** No, Yes
14. **Have you ever felt sexually aroused when you've had any exposure to two people of opposite gender (i.e. a man and a woman) having a sexual encounter (through gossip, a video, or some other means)?** No, Yes
15. **Have you ever voluntarily had sexual contact (such as kissing or petting) with a member of the opposite sex?** No, Yes
16. **Would you be willing to have sexual relations with someone of the opposite sex?** No, Maybe, Yes

17. **How frequent are your opposite-sex fantasies or dreams?** Never have them, rare/ occasional, frequent
18. **How frequent are your opposite-sex encounters?** Never have them, rare/occasional, frequent

OUTNESS INVENTORY

Use the following rating scale to indicate how open you are about your sexual orientation to the people listed below. Leave items blank if they do not apply to you:

0 = doesn't apply to my situation

1 = person definitely does NOT know about your sexual orientation status

2 = person might know about your sexual orientation status, but it is NEVER talked about

3 = person probably knows about your sexual orientation status, but it is NEVER talked about

4 = person probably knows about your sexual orientation status, but it is RARELY talked about

5 = person definitely knows about your sexual orientation status, but it is RARELY talked about

6 = person definitely knows about your sexual orientation status, and it is SOMETIMES talked about

7 = person definitely knows about your sexual orientation status, and it is OPENLY talked about

1. Mother
2. Father
3. Brothers/Sisters
4. Extended family
5. New straight friends
6. Work peers Work supervisors
7. Members of my religious community
8. Leaders of my religious community
9. Strangers, acquaintances
10. Old straight friends

ACCEPTANCE QUESTIONS

1. **Which best describes the reactions your parent(s) had when you disclosed your sexual identity to them?**
 - I have not come out to them yet
 - Really negative and/or rejecting about it

- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

2. Which best describes the reactions your sibling(s) had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

3. Which best describes the reactions your extended family had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

4. Which best describes the reactions your close friends had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

5. Which best describes the reactions your acquaintances had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

6. Which best describes the reactions your work supervisors had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it

- Fully positive and/or supportive and/or accepting about it

7. Which best describes the reactions your work colleagues/friends had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

8. Which best describes the reactions the members of your religious community had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

9. Which best describes the reactions the leaders of your religious community had when you disclosed your sexual identity to them?

- I have not come out to them yet
- Really negative and/or rejecting about it
- Not fully rejecting, but still a bit negative about it
- Neutral and/or indifferent about it
- Quite good about it, but not extremely supportive or accepting about it
- Fully positive and/or supportive and/or accepting about it

FASSINGER'S QUESTIONNAIRE

The following items aim to identify how you feel or the beliefs you have about your sexuality currently. Some items may not apply to you; others may have been applicable in the past. This questionnaire is interested by which items may apply to you in the present. Please rate the following items on how strongly they connect to the feeling and beliefs you have about your sexuality at this time.

Some people prefer to use other labels than lesbian, gay or bisexual to describe their sexual orientation (e.g. queer, questioning, mostly straight). This study uses the term LGB for convenience, and asks for your understanding if these terms do not fully capture your identity.

(1 = strongly disagree; 2 = disagree; 3 = disagree somewhat; 4 = neither disagree nor agree; 5 = agree somewhat; 6 = agree; and 7 = strongly agree)

GENDER FEMALE: Lesbian Identity Questionnaire

1. I am getting to know lesbian, gay, and bisexual (LGB) people for the first time, and it is scary but exciting.
2. My sexual orientation is now an integrated part of my social and public life
3. I am just realising that I am interested in dating the women.
4. I am beginning to realise from my choices that I am expressing a clear attraction for women, rather than/as well as men as partners/lovers.
5. Lately, I am constantly aware that I have been mistreated because of my sexuality.
6. I am just noticing that there are LGB people everywhere, and I can often sense who they are.
7. Recently, I have reached the point where I clearly feel intimate sexually and emotionally with women rather than/as well as men
8. I am just realising that homosexuality/bisexuality is not all there is.
9. I am just now recognising that the way I feel about women may mean something.
10. I believe there are many straight people who are accepting of LGB people.
11. I am just beginning to think the way I am feeling means that I am in love with a woman.
12. I have recently been undergoing a personal liberation and getting involved in the LGB culture for the first time.
13. I can now, as identifying as LGB, and mostly straight, relate comfortably with straight and non-straight people.
14. For the first time, it has become very important for me to find and meet non-straight people.
15. I am just realising for the first time that I feel different from women.
16. I am just realised recently that I have been conditioned to view LGB people negatively.
17. I am beginning to notice for the first time that I have a strong desire to touch another woman's body.
18. Lately, I have become very aware that many straight people don't even know that LGB people exist.
19. I now recognise clearly that I am a person who has intimate romantic relationships with women.
20. Lately, I find myself withdrawing from the straight world.
21. I am just realising for the first time that I might be willing to live with a woman lover.
22. I get angry a lot lately at the way straight people talk about and treat LGB people.
23. Now that I am consistently doing what I want to do in terms of love and sex, I feel more integrated as a person.
24. I am just realising that I feel pulled toward women in ways that I don't understand.
25. I am finally at a point where I feel comfortable with my sexuality no matter where I am or who I am with.
26. Recently, I have discovered that there may be people out there like me who aren't trying to live as a straight person.

27. I have just become aware for the first time that I have a strong desire to kiss another woman.
28. Lately, I have realised that I may not consider men as intimate partners.
29. I can't even imagine what a roomful of LGB people would be like.
30. I have reached the point where I feel a deep contentment about my love of other women.
31. I am just noticing for the first time that I feel nervous and emotional around women.
32. Lately, I only feel at ease in LGB surroundings.
33. Recently, I have found myself wondering for the first time what it might be like to be romantic with a woman.
34. These days, I mostly rely on my LGB friends for support, but have some good straight friends as well.
35. I now fully accept my emotional and sexual attraction for women.
36. The way I feel recently makes me think for the first time that I might like to be sexual with a woman.
37. I had no idea before now that there were LGB people out there.
38. I have reached the point where I feel deeply fulfilled in my relationship with women.
39. I am just realising for the first time that I have been duped into believing everyone is straight.
40. I have reached the point where I have successfully incorporated my intimacy with women into my overall identity.

GENDER MALE: Gay Identity Questionnaire

1. Lately, I prefer spending time with LGB people because I find them much more interesting than straight people
2. I have reached the point where I have successfully incorporated my intimacy with men into my overall identity.
3. I feel attracted to a specific man, but I'm not sure I'm attracted to men in general.
4. I have been wanting to get to know LGB people, but the stigma attached to LGB people is frightening.
5. I have finally reached the point where I love and appreciate myself for my sexual orientation.
6. I get angry a lot lately at the way straight people talk about and treat LGB people.
7. Lately, I have been wondering for the first time if there is something strange about me compared to other men.
8. Just recently, I have noticed that my feelings and fantasies are finally uniting with my sexual behaviour.
9. I am just noticing for the first time that I have a strong desire to touch another man.
10. Recently, I have begun to realise that some of my suffering could have been avoided if my homosexuality/bisexuality had been encouraged.

11. Lately, I have become very aware that many straight people don't even know that LGB people exist.
12. I have reached a point where I feel deep commitment about my love of other men
13. I have reached a point where I fully accept and understand that I am a member of the LGB community.
14. Just recently, I have discovered that there are people there who have the same kinds of sexual desires that I do.
15. Lately, I have come to realise that I may no longer willing to consider women as intimate partners.
16. I am just realising for the first time that I feel different from other men.
17. These days, I mostly relying on my LGB friends for support, but I have some good straight friends as well.
18. I can't even imagine what a room full of LGB people would be like.
19. I am just starting to notice that I may not like dating the women as much as men do.
20. Sometimes I get angry at the way LGB people are treated, but I am not preoccupied by it.
21. Just recently, I have just realised I am interested in being intimate with men.
22. Now that I am learning about LGB people for the first time, I feel guilty I had about attitudes I had about LGB people in the past.
23. I am just realising for the first time that I might be willing to live with a man.
24. Right now, I'm afraid to associate with LGB people because it might reveal my sexuality to others.
25. I have become aware for the first time that I have a strong desire to kiss another man.
26. Lately, I have been feeling sad and angry at realising that societal prejudice stood in the way of my true feelings for men.
27. I am just realising for the first time that I am not/not only attracted to the women and it scares me.
28. Until recently, I had no idea how many LGB people were out there.
29. I am just noticing for the first time that I want to become closer to men or a certain man.
30. Now that I am consistently doing what I want to do in terms of love and sex, I feel more integrated as a person.
31. Recently, I have come to realise that I was conditioned to view LGB people negatively.
32. I have come to realise that while some straight people are anti-gay, many are not.
33. Recently, I have reached the point where I clearly feel intimate sexually and emotionally with men rather than/as well as women.
34. I am just noticing for the first time that I feel nervous and emotional around men, but I don't know why.
35. I have reached a point where my love for men is an important part of me but it is not the only thing that defines me.

36. I have recently been undergoing a personal liberation and becoming involved in LGB culture for the first time.
37. Recently, I have reached the point where I know clearly that I am LGB.
38. Recently, I have been wondering a lot about whether I can fit in as a LGB person and develop my own LGB style.
39. I can now, as identifying as LGB relate comfortably with straight and non-straight people.
40. I have discovered for the first time that there are LGB people out there, and I want to find them.

LESBIAN, GAY, AND BISEXUAL IDENTITY SCALE

For each of the following questions, please mark the response that best indicates your current experience as an LGB person. Please be as honest as possible: Indicate how you really feel now, not how you think you should feel. There is no need to think too much about any one question. Answer each question according to your initial reaction and then move on to the next.

Some people prefer to use other labels than lesbian, gay or bisexual to describe their sexual orientation (e.g. queer, questioning, mostly straight). This study uses the term LGB for convenience, and asks for your understanding if these terms do not fully capture your identity.

(1 = Strongly Disagree; 2 = Disagree; 3 = Disagree Somewhat; 4 = Agree Somewhat; 5 = Agree; and 6 = Agree Strongly)

1. I prefer to keep my same-sex romantic relationships rather private.
2. If it were possible, I would choose to be straight.
3. I'm not totally sure what my sexual orientation is.
4. I keep careful control over who knows about my same-sex romantic relationships.
5. I often wonder whether others judge me for my sexual orientation.
6. I am glad to be an LGB person.
7. I look down on straight people.
8. I keep changing my mind about my sexual orientation.
9. I can't feel comfortable knowing that others judge me negatively for my sexual orientation.
10. I feel that LGB people are superior to straight people.
11. My sexual orientation is an insignificant part of who I am.
12. Admitting to myself that I'm a LGB person has been a very painful process.
13. I'm proud to be part of the LGB community.
14. I can't decide whether I am mostly straight, bisexual, gay/lesbian, or another non-straight sexual orientation.
15. My sexual orientation is a central part of my identity.
16. I think a lot about how my sexual orientation affects the way people see me.

17. Admitting to myself that I'm a LGB person has been a very slow process.
 18. Straight people have boring lives compared with LGB people.
 19. My sexual orientation is a very personal and private matter.
 20. I wish I were straight.
 21. To understand who I am as a person, you have to know that I'm LGB.
 22. I get very confused when I try to figure out my sexual orientation.
 23. I have felt comfortable with my sexual identity just about from the start.
 24. Being a LGB person is a very important aspect of my life.
 25. I believe being LGB is an important part of me.
 26. I am proud to be LGB.
 27. I believe it is unfair that I am attracted to people of the same sex.

Psychological Well-being Measures

Affectometer 2

Please complete the following sentence with each of the adjectives by stating how often you have felt each feeling.

“Over the past few weeks I have had the feeling described by...” (i.e. how often have you felt each adjective?)
(1- not at all; 2- occasionally; 3- some of time; 4-often; and 5- all of the time)

1. Satisfied
 2. Optimistic
 3. Useful
 4. Confident
 5. Understood
 6. Loving
 7. Free and easy
 8. Enthusiastic
 9. Good-natured
 10. Clear-headed
 11. Disconnected
 12. Hopeless
 13. Insignificant
 14. Helpless
 15. Lonely
 16. Withdrawn
 17. Tense
 18. Depressed
 19. Impatient
 - 20. Confused**

General Happiness and Satisfaction with Life Scale

“Taking all things together, how happy would you say you have been in the past few weeks?”

- very unhappy
- unhappy
- somewhat unhappy
- mixed (about equally happy and unhappy)
- Somewhat happy
- Happy
- Very happy

“Taking all things into consideration, how do you feel about your life as a whole?”

- terrible
- unhappy
- mostly dissatisfied
- mixed (about equally satisfied and dissatisfied)
- mostly satisfied
- pleased
- delighted

Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with the following descriptions (strongly disagree; disagree; agree; and strongly agree):

1. On the whole, I am satisfied with myself.
2. At times, I think I am no good at all.
3. I feel that I have a number of good qualities.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I certainly feel useless at times.
7. I feel that I'm a person of worth, at least on an equal plane with others.
8. I wish I could have more respect for myself.
9. All in all, I am inclined to feel that I am a failure.
10. I take a positive attitude toward myself.

PROMIS Emotional Distress—Anger—Short Form

Please indicate how often have the following symptoms bothered you in the past 7 days (1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often; and 5 = Always)

1. I was irritated more than people knew.
2. I felt angry.
3. I felt like I was ready to explode.
4. I was grouchy.
5. I felt annoyed.

"Where did you hear about this research?"

- Facebook status
- Emailing list
- Flyer at University, Gay bar or Noticeboard
- Word of Mouth
- Other; Please specify

Appendix C: Syntax for Placing Participants in the Phases of Development

DATASET ACTIVATE DataSet1.

COMPUTE Male_Ind_Aware=F_M_7 + F_M_16 + F_M_19 + F_M_27 + F_M_34.

EXECUTE.

COMPUTE Male_IndExplore=F_M_3 + F_M_9 + F_M_21 + F_M_25 + F_M_29.

EXECUTE.

COMPUTE Male_IndCommit=F_M_8 + F_M_15 + F_M_23 + F_M_33 + F_M_37.

EXECUTE.

COMPUTE Male_IndSynth=F_M_2 + F_M_5 + F_M_12 + F_M_30 + F_M_35.

EXECUTE.

COMPUTE Male_Group_Aware=F_M_4 + F_M_18 + F_M_14 + F_M_24 + F_M_28.

EXECUTE.

COMPUTE Male_GroupExplore=F_M_11 + F_M_22 + F_M_31 + F_M_38 + F_M_40.

EXECUTE.

COMPUTE Male_GroupCommit=F_M_1 + F_M_6 + F_M_10 + F_M_26 + F_M_36.

EXECUTE.

COMPUTE Male_GroupSynth=F_M_13 + F_M_17 + F_M_20 + F_M_32 + F_M_39.

EXECUTE.

COMPUTE Female_Ind_Aware=F_F_9 + F_F_15 + F_F_24 + F_F_31 + F_F_33.

EXECUTE.

COMPUTE Female_IndExplore=F_F_3 + F_F_11 + F_F_17 + F_F_27 + F_F_36.

EXECUTE.

COMPUTE Female_IndCommit=F_F_4 + F_F_7 + F_F_19 + F_F_21 + F_F_28.

EXECUTE.

COMPUTE Female_IndSynth=F_F_23 + F_F_30 + F_F_35 + F_F_38 + F_F_40.

EXECUTE.

COMPUTE Female_Group_Aware=F_F_8 + F_F_26 + F_F_29 + F_F_37 + F_F_39.

EXECUTE.

COMPUTE Female_GroupExplore=F_F_1 + F_F_6 + F_F_14 + F_F_16 + F_F_18.

EXECUTE.

COMPUTE Female_GroupCommit=F_F_5 + F_F_12 + F_F_20 + F_F_22 + F_F_32.

EXECUTE.

COMPUTE Female_GroupSynth=F_F_2 + F_F_10 + F_F_13 + F_F_25 + F_F_34.

EXECUTE.

DATASET ACTIVATE DataSet1.

COMPUTE Ind_Branch_Male=max (Male_Ind_Aware, Male_IndExplore, Male_IndCommit,

Male_Ind_Synth).

EXECUTE.

COMPUTE ScoresTied_Ind_Male = 0.

IF Male_Ind_Aware=Ind_Branch_Male ScoresTied_Ind_Male=ScoresTied_Ind_Male+1.

IF Male_Ind_Explore=Ind_Branch_Male ScoresTied_Ind_Male=ScoresTied_Ind_Male+1.

IF Male_Ind_Commit=Ind_Branch_Male ScoresTied_Ind_Male=ScoresTied_Ind_Male+1.

IF Male_Ind_Synth=Ind_Branch_Male ScoresTied_Ind_Male=ScoresTied_Ind_Male+1.

IF ScoresTied_Ind_Male=2 Male_Ind_tgroup=-7.

IF ScoresTied_Ind_Male>2 Male_Ind_tgroup=-8.

IF Male_Ind_Aware=Ind_Branch_Male Male_Ind_group=1.

If Male_Ind_Explore=Ind_Branch_Male Male_Ind_group=2.

If Male_Ind_Commit=Ind_Branch_Male Male_Ind_group=3.

If Male_Ind_Synth=Ind_Branch_Male Male_Ind_group=4.

DATASET ACTIVATE DataSet1.

COMPUTE Group_Branch_Male=max (Male_Group_Aware, Male_Group_Explore,
Male_Group_Commit,

Male_Group_Synth).

EXECUTE.

COMPUTE ScoresTied_Group_Male = 0.

IF Male_Group_Aware=Group_Branch_Male

ScoresTied_Group_Male=ScoresTied_Group_Male+1.

IF Male_Group_Explore=Group_Branch_Male

ScoresTied_Group_Male=ScoresTied_Group_Male+1.

IF Male_Group_Commit=Group_Branch_Male

ScoresTied_Group_Male=ScoresTied_Group_Male+1.

IF Male_Group_Synth=Group_Branch_Male
ScoresTied_Group_Male=ScoresTied_Group_Male+1.

IF ScoresTied_Group_Male=2 Male_Group_tgroup=-7.

IF ScoresTied_Group_Male>2 Male_Group_tgroup=-8.

IF Male_Group_Aware=Group_Branch_Male Male_Group_group=1.

If Male_Group_Explore=Group_Branch_Male Male_Group_group=2.

If Male_Group_Commit=Group_Branch_Male Male_Group_group=3.

If Male_Group_Synth=Group_Branch_Male Male_Group_group=4.

DATASET ACTIVATE DataSet1.

COMPUTE Group_Branch_Female=max (Female_Group_Aware, Female_Group_Explore,
Female_Group_Commit,

Female_Group_Synth).

EXECUTE.

```

COMPUTE ScoresTied_Group_Female = 0.
IF Female_Group_Aware=Group_Branch_Female
ScoresTied_Group_Female=ScoresTied_Group_Female+1.
IF Female_Group_Explore=Group_Branch_Female
ScoresTied_Group_Female=ScoresTied_Group_Female+1.
IF Female_Group_Commit=Group_Branch_Female
ScoresTied_Group_Female=ScoresTied_Group_Female+1.
IF Female_Group_Synth=Group_Branch_Female
ScoresTied_Group_Female=ScoresTied_Group_Female+1.

```

```

IF ScoresTied_Group_Female=2 Female_Group_tgroup=-7.
IF ScoresTied_Group_Female>2 Female_Group_tgroup=-8.

```

```

IF Female_Group_Aware=Group_Branch_Female Female_Group_group=1.
If Female_Group_Explore=Group_Branch_Female Female_Group_group=2.
If Female_Group_Commit=Group_Branch_Female Female_Group_group=3.
If Female_Group_Synth=Group_Branch_Female Female_Group_group=4.

```

```

DATASET ACTIVATE DataSet1.
COMPUTE Ind_Branch_Female=max (Female_Ind_Aware, Female_Ind_Explore,
Female_Ind_Commit,
Female_Ind_Synth).
EXECUTE.

```

```

COMPUTE ScoresTied_Ind_Female = 0.
IF Female_Ind_Aware=Ind_Branch_Female ScoresTied_Ind_Female=ScoresTied_Ind_Female+1.
IF Female_Ind_Explore=Ind_Branch_Female
ScoresTied_Ind_Female=ScoresTied_Ind_Female+1.
IF Female_Ind_Commit=Ind_Branch_Female
ScoresTied_Ind_Female=ScoresTied_Ind_Female+1.
IF Female_Ind_Synth=Ind_Branch_Female ScoresTied_Ind_Female=ScoresTied_Ind_Female+1.

IF ScoresTied_Ind_Female=2 Female_Ind_tgroup=-7.
IF ScoresTied_Ind_Female>2 Female_Ind_tgroup=-8.

```

```

IF Female_Ind_Aware=Ind_Branch_Female Female_Ind_group=1.
If Female_Ind_Explore=Ind_Branch_Female Female_Ind_group=2.
If Female_Ind_Commit=Ind_Branch_Female Female_Ind_group=3.
If Female_Ind_Synth=Ind_Branch_Female Female_Ind_group=4.

```

Appendix D: Low Risk Ethics Notification



FILE

MASSEY UNIVERSITY
TE KUNENGA KI PŪREHUROA

3 October 2014

Tamara Bejakovich
69 Waldegrave Street
PALMERSTON NORTH 4410

Dear Tamara

Re: "Presumed Straight Until Demonstrated Otherwise": The Impact of Acceptance, Heteronormativity and Sexual Identity Development on Psychological Wellbeing

Thank you for your Low Risk Notification which was received on 30 September 2014.

Your project has been recorded on the Low Risk Database which is reported in the Annual Report of the Massey University Human Ethics Committees.

You are reminded that staff researchers and supervisors are fully responsible for ensuring that the information in the low risk notification has met the requirements and guidelines for submission of a low risk notification.

The low risk notification for this project is valid for a maximum of three years.

Please notify me if situations subsequently occur which cause you to reconsider your initial ethical analysis that it is safe to proceed without approval by one of the University's Human Ethics Committees.

Please note that travel undertaken by students must be approved by the supervisor and the relevant Pro Vice-Chancellor and be in accordance with the Policy and Procedures for Course-Related Student Travel Overseas. In addition, the supervisor must advise the University's Insurance Officer.

A reminder to include the following statement on all public documents:

"This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research."

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor John O'Neill, Director (Research Ethics), telephone 06 350 5249, e-mail hmanethics@massey.ac.nz.

Please note that if a sponsoring organisation, funding authority or a journal in which you wish to publish requires evidence of committee approval (with an approval number), you will have to provide a full application to one of the University's Human Ethics Committees. You should also note that such an approval can only be provided prior to the commencement of the research.

Yours sincerely

John O'Neill (Professor)
Chair, Human Ethics Chairs' Committee and
Director (Research Ethics)

cc Assoc Prof Ross Flett
School of Psychology
PN320

Prof Mandy Morgan, HoS
School of Psychology
PN320

Massey University Human Ethics Committee
Accredited by the Health Research Council

Research Ethics Office, Research and Enterprise

Massey University, Private Bag 11222, Palmerston North 4442, New Zealand T 06 350 5249, F 06 350 5622
E hmanethics@massey.ac.nz; animalethics@massey.ac.nz; glo@massey.ac.nz www.massey.ac.nz

Appendix E: Information Sheet

"Presumed straight until demonstrated otherwise": The impact of acceptance, heteronormativity, and sexual identity development on psychological well-being

INFORMATION SHEET

Researcher(s) Introduction

My name is Tamara Bejakovich and I am currently studying toward a Doctorate in Clinical Psychology at Massey University. I am interested in finding out about the relationship between sexual identity development and general psychological well-being (e.g. life satisfaction, happiness and self-esteem).

Invitation:

You are invited to take part in a questionnaire study which aims to learn about how people identify and label their own sexual identity (straight, gay/lesbian, bisexual, among other identities) and the kinds of behaviours, attractions and fantasies that go with sexual orientation and general sexual identity. It also inquires about how their progression through sexual identity development may influence their well-being, and factors related to their sexual identity, such as acceptance from self and others, could influence their well-being.

If you choose to complete the following survey you may be asked questions about:

- Sexual identity (e.g straight, gay/lesbian, bisexual and questioning among other options);
- Sexual attractions (e.g. "Have you ever felt sexually attracted to a member of the same sex?"), fantasies (e.g. "Have you ever had a dream about a sexual encounter with a member of the opposite sex?"), and behaviours (e.g. "Have you ever voluntary had sexual contact with a member of the same sex?");
- Acceptance from others;
- Sexual Identity Development (e.g. "Now that I am consistently doing what I want to do in terms of love and sex, I feel more integrated as a person.");
- A scale into the feeling around sexual identity (e.g. "Admitting to myself that I'm a LGB person has been a very painful process.");
- General wellbeing and life satisfaction;
- Some background demographic.

I am interested in everybody from all walks of life and would welcome your participation.

Who can participate?

I am keen to have anyone over the age of 16 participate. Your answers will be anonymous. No one who knows you will ever see your answers or be able to link your answers back to you. If you are reading this information sheet then you will have found the study via Facebook, email, advertisements or through other advertising forums.

What will happen if I decide to take part?

Completing the survey could take anywhere between 10 and 45 minutes, depending on the answers given. Once you click on the next button at the bottom of this page you will be directed to the survey. On completion of the survey your results will be sent through to a database automatically.

You will be asked to complete a number of questionnaires. Firstly, you will be asked about a number of demographic details, including age, gender, sexual orientation, ethnicity, religion, sexual identity security and education, as well the attitudes toward same sex attractions, behaviours and fantasies of your personal, religion's, location's and your social circle. Following this, you will be asked to complete the Epstein Sexual Orientation Inventory that has 18 items on one's sexual fantasies, attractions and behaviours. Depending on your answers, you may also be asked to complete other questionnaires, including: Outness Inventory – how out of the closet you are (if you have identified with same sex inclinations); Acceptance from others; Fassinger Identity Questionnaire – a 40 item questionnaire assessing sexual identity development; Lesbian, Gay and Bisexual Identity Scale – a 27 item questionnaire assessing dimensions related to sexual identity. Finally, you will be asked to complete a number of questionnaires in relation to psychological well-being: the Affectometer 2 where there is a list of 20 adjectives and you are to rate them; single life satisfaction question; single happiness question; Rosenberg Self-Esteem Questionnaire – 10 item questionnaire assessing self-esteem; and PROMIS Emotional Distress—Anger—Short Form – a 5 item questionnaire assessing current levels of anger.

How will the information be stored and used?

All the information you give to this research is completely confidential. Data resulting from this research will be securely stored at Massey University for 5 years, after which it will be destroyed. The analysed information you provide will be used in my doctoral dissertation to be submitted for assessment, and the findings may be published in scientific journals.

Your rights:

You are under no obligation to accept this invitation. If you decide to participate, completion and submission of the questionnaire implies consent. You have the right to decline to answer any particular question or questions. In order to protect your privacy the survey is anonymous. The questions in the survey are in part about sexual attractions, fantasies and behaviours, and sexual identity development. If these topics make you uncomfortable then you might wish to stop here.

Project Contacts:

If you have any further questions please feel free to contact the researcher or supervisor.

Researcher	Primary Supervisor
<p>Tamara Bejakovich School of Psychology Massey University c/o Dr R Flett School of Psychology Private Bag 11-222 Palmerston North 4442 New Zealand bejakovichresearch@gmail.com</p>	<p>Dr Ross Flett School of Psychology Massey University Private Bag 11-222 Palmerston North 4442 New Zealand Phone: (06) 356-9099, Ext 2051 r.a.flett@massey.ac.nz</p>

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 13/26.

If you have any concerns about the conduct of the research, please contact Dr Brian Finch, Chair, Massey University Human Ethics Committee: Southern A, telephone 06 350-5799 x 84459, Email: humanethicssoutha@massey.ac.nz

Appendix F: Descriptive and inferential statistics of the differences between demographic details in terms of the dependent variables

Table i.
Descriptive statistics of the association between demographic details and psychological well-being, identity disclosure, and the presumption of heterosexuality.

	Positive Affect	Negative Affect	Anger	Self-Esteem	Life Satisfaction	General Happiness	Identity Disclosure	Presumption Of Heterosexuality
Gender	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Male	35.53 (6.16)	24.19 (8.15)	13.06 (4.36)	26.71 (2.71)	5.09 (1.23)	5.17 (1.43)	3.87 (1.72)	3.89 (0.93)
Female	34.49 (6.77)	25.38 (8.26)	14.00 (4.35)	26.95 (2.44)	5.00 (1.35)	5.00 (1.52)	3.64 (1.65)	4.33 (0.76)
Other	30.02 (6.17)	31.15 (8.36)	15.01 (4.65)	27.13 (2.88)	4.12 (1.48)	3.94 (1.70)	3.46 (1.39)	3.83 (0.93)
Age								
16 – 19 years	30.86 (7.37)	30.66 (9.31)	15.97 (4.77)	27.26 (2.62)	4.32 (1.45)	4.23 (1.69)	2.93 (1.37)	4.14 (0.89)
20 – 24 years	34.59 (6.31)	25.52 (7.80)	13.86 (4.42)	27.11 (2.36)	5.04 (1.31)	5.01 (1.50)	3.60 (1.50)	4.21 (0.82)
25 – 29 years	35.34 (6.17)	24.51 (7.17)	13.20 (3.73)	26.79 (2.44)	5.18 (1.09)	5.20 (1.36)	3.83 (1.56)	4.25 (0.76)
30 – 34 years	34.78 (6.64)	24.90 (7.76)	13.99 (3.76)	26.97 (2.42)	5.11 (1.33)	5.18 (1.46)	4.27 (1.78)	4.35 (0.80)
35 – 39 years	35.57 (6.02)	22.47 (7.01)	12.73 (3.44)	26.03 (3.13)	5.30 (1.38)	5.31 (1.44)	4.32 (1.88)	4.06 (0.95)
40 – 44 years	35.04 (6.76)	22.94 (7.63)	12.85 (4.39)	26.85 (2.49)	4.96 (1.34)	5.23 (1.22)	4.66 (1.61)	4.12 (0.86)
45 – 49 years	37.08 (6.03)	21.00 (7.53)	12.08 (3.86)	26.67 (2.70)	5.44 (1.35)	5.36 (1.48)	4.57 (1.64)	4.03 (0.97)
50 – 54 years	37.07 (5.97)	22.57 (6.96)	12.12 (3.72)	26.65 (2.50)	5.03 (1.31)	5.22 (1.30)	4.33 (1.87)	4.15 (0.74)
55 – 59 years	36.90 (5.58)	21.58 (7.55)	13.12 (4.69)	26.56 (2.79)	5.07 (1.35)	5.07 (1.62)	4.20 (2.00)	4.08 (1.07)
60 – 64 years	37.56 (4.21)	22.13 (7.79)	11.80 (3.63)	25.60 (1.96)	5.38 (0.89)	5.88 (1.09)	4.16 (1.51)	4.33 (0.62)
65 – 69 years	37.50 (3.78)	19.00 (4.75)	12.38 (3.70)	25.25 (1.67)	6.00 (0.76)	6.13 (0.99)	4.58 (1.66)	4.20 (1.16)
70 -74 years	40.60 (1.52)	16.00 (2.55)	8.20 (1.30)	24.40 (3.21)	5.80 (0.84)	6.00 (0.71)	5.73 (-)	4.43 (0.84)
75 and over	36.50 (4.95)	20.00 (5.66)	11.00 (4.24)	23.50 (0.71)	4.50 (0.71)	5.00 (1.41)	5.00 (0.00)	

Table i. (Continued)
Descriptive statistics of the association between demographic details and psychological well-being, identity disclosure, and the presumption of heterosexuality.

	Positive Affect M (SD)	Negative Affect M (SD)	Anger M (SD)	Self-Esteem M (SD)	Life Satisfaction M (SD)	General Happiness M (SD)	Identity Disclosure M (SD)	Presumption Of Heterosexuality M (SD)
Education								
Primary School	31.09 (6.61)	31.45 (10.61)	15.73 (5.53)	27.82 (3.19)	4.18 (1.83)	4.36 (1.75)	2.41 (1.15)	4.30 (0.92)
High School	31.79 (7.10)	28.94 (9.02)	15.34 (4.73)	27.22 (2.65)	4.46 (1.41)	4.47 (1.65)	3.30 (1.55)	4.13 (0.91)
Diploma/Certificate	35.15 (6.54)	25.64 (8.44)	13.99 (4.43)	27.15 (2.65)	4.96 (1.35)	5.01 (1.54)	4.01 (1.70)	4.11 (0.89)
Bachelor's Degree	35.72 (5.72)	23.33 (6.82)	12.96 (3.96)	26.74 (2.40)	5.27 (1.15)	5.29 (1.32)	3.83 (1.56)	4.27 (0.75)
Honours/Masters	36.23 (6.05)	22.81 (7.13)	12.65 (3.67)	26.40 (2.27)	5.33 (1.20)	5.32 (1.41)	3.88 (1.70)	4.31 (0.79)
PhD	35.92 (6.43)	22.82 (6.80)	12.50 (3.35)	26.69 (2.40)	5.40 (1.20)	5.20 (1.26)	4.27 (1.81)	4.09 (0.80)
Religious Belief								
Atheist	34.07 (6.87)	25.77 (8.59)	13.71 (4.46)	26.90 (2.56)	4.93 (1.36)	4.97 (1.55)	3.73 (1.58)	4.14 (0.85)
Spiritual but not Religious	34.81 (6.57)	25.42 (8.32)	13.80 (4.35)	26.94 (2.53)	4.91 (1.36)	4.95 (1.55)	3.74 (1.68)	4.21 (0.85)
Religious	34.00 (6.72)	25.35 (8.20)	14.64 (4.35)	26.91 (2.51)	5.15 (1.27)	5.00 (1.50)	3.18 (1.65)	4.30 (0.80)
Country Attitudes								
Unchanged Supportive	34.36 (6.70)	25.67 (8.39)	13.91 (4.41)	26.92 (2.55)	4.95 (1.36)	4.94 (1.54)	3.72 (1.64)	4.17 (0.85)
Supportive to Rejecting	33.00 (0.00)	22.00 (5.66)	13.50 (4.95)	27.50 (2.12)	4.00 (0.00)	4.50 (0.71)	-	4.75 (0.35)
Rejecting to Supportive	36.10 (6.92)	22.82 (8.81)	13.37 (4.59)	26.80 (2.49)	5.31 (1.24)	5.38 (1.41)	3.62 (1.63)	4.34 (0.86)
Unchanged Rejecting	33.24 (6.62)	26.38 (7.13)	13.45 (4.00)	27.41 (4.00)	4.27 (1.28)	4.95 (1.53)	2.05 (1.01)	4.62 (0.63)
Area Living in								
Rural area	34.91 (7.33)	26.84 (9.52)	14.17 (4.80)	26.64 (3.24)	4.85 (1.59)	4.70 (1.83)	4.28 (1.90)	3.63 (0.88)
Small town	33.96 (7.13)	25.70 (9.01)	14.26 (4.70)	26.87 (2.58)	4.86 (1.38)	4.94 (1.49)	4.21 (1.61)	3.39 (0.88)
Metropolitan area	34.50 (6.54)	25.39 (8.13)	13.74 (4.28)	26.95 (2.45)	4.99 (1.32)	4.99 (1.52)	4.18 (1.63)	3.74 (0.83)

Table ii.
Descriptive statistics of the association between demographic details in terms of their environmental acceptance and the LGBIS subscales.

Gender	Environmental	Acceptance	Concealment	Identity	Internalised	Difficult	Identity	Identity	
	Acceptance	Concerns	Motivation	Uncertainty	Homonegativity	Process	Superiority	Affirmation	Centrality
	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Male	3.94 (0.92)	3.94 (1.63)	3.95 (1.70)	2.35 (1.61)	2.40 (1.57)	4.02 (1.57)	2.22 (1.30)	5.30 (1.43)	4.21 (1.39)
Female	4.04 (0.86)	4.16 (1.57)	4.00 (1.64)	2.84 (1.78)	2.20 (1.45)	3.87 (1.52)	2.03 (1.16)	5.42 (1.31)	4.26 (1.32)
Other	3.94 (0.84)	4.42 (1.31)	3.77 (1.40)	2.26 (1.51)	1.76 (1.02)	3.33 (1.56)	2.27 (1.46)	5.86 (1.26)	4.87 (1.31)
Age									
16 – 19 years	3.87 (0.94)	4.53 (1.45)	4.30 (1.68)	3.18 (1.93)	2.37 (1.55)	3.85 (1.50)	2.04 (1.18)	5.45 (1.41)	4.22 (1.25)
20 – 24 years	4.01 (0.84)	4.28 (1.52)	3.99 (1.60)	2.76 (1.69)	2.24 (1.46)	3.92 (1.49)	2.10 (1.25)	5.30 (1.36)	4.24 (1.39)
25 – 29 years	4.16 (0.86)	4.10 (1.47)	3.96 (1.65)	2.42 (1.54)	2.00 (1.29)	3.94 (1.55)	2.14 (1.22)	5.68 (1.19)	4.47 (1.33)
30 – 34 years	4.02 (0.88)	3.76 (1.63)	3.83 (1.53)	2.21 (1.43)	2.33 (1.48)	3.48 (1.54)	2.11 (1.21)	5.03 (1.59)	4.30 (1.52)
35 – 39 years	4.11 (0.86)	3.43 (1.51)	3.64 (1.57)	2.28 (1.50)	1.64 (1.15)	3.29 (1.51)	2.22 (1.02)	5.74 (1.14)	4.39 (1.34)
40 – 44 years	4.10 (0.87)	3.68 (1.90)	3.81 (1.54)	2.45 (1.68)	2.16 (1.30)	4.08 (1.62)	2.17 (1.45)	5.58 (1.19)	4.28 (1.10)
45 – 49 years	3.79 (0.93)	3.82 (1.59)	3.47 (1.77)	1.95 (1.79)	2.07 (1.66)	4.33 (1.64)	2.22 (1.44)	5.73 (1.20)	4.93 (1.34)
50 – 54 years	4.00 (0.86)	3.81 (1.87)	3.43 (1.47)	2.24 (1.57)	2.21 (1.64)	3.38 (1.83)	2.38 (1.51)	5.31 (1.25)	4.82 (1.33)
55 – 59 years	4.06 (0.82)	3.68 (1.19)	3.82 (1.68)	1.99 (1.31)	1.97 (1.20)	3.77 (1.83)	1.68 (0.86)	6.03 (0.99)	4.19 (1.50)
60 – 64 years	4.03 (0.90)	3.60 (1.89)	3.27 (0.86)	1.75 (1.54)	1.67 (0.97)	4.00 (1.66)	3.47 (1.71)	6.00 (1.08)	4.65 (1.54)
65 – 69 years	4.50 (0.67)	3.67 (2.08)	2.80 (1.19)	1.45 (0.74)	1.13 (0.30)	3.25 (1.71)	1.73 (1.16)	5.80 (1.50)	4.20 (1.60)
70 – 74 years	3.95 (0.76)	3.00 (-)	2.00 (-)	1.00 (-)	2.00 (-)	6.67 (-)	1.00 (-)	5.67 (-)	4.60 (-)
75 years and over		4.00 (1.00)							

Table ii. (continued)
Descriptive statistics of the association between demographic details in terms of their environmental acceptance and the LGBIS subscales.

	Environmental Acceptance	Acceptance Concerns	Concealment Motivation	Identity Uncertainty	Internalised Homonegativity	Difficult Process	Identity Superiority		Identity Affirmation		Identity Centrality M (SD)
							M (SD)	M (SD)	M (SD)	M (SD)	
Education											
Primary School	3.69 (1.06)	4.48 (1.37)	4.27 (1.56)	3.59 (2.23)	1.97 (1.59)	2.93 (1.39)	2.48 (1.16)	5.52 (1.49)	4.40 (1.56)		
High School	3.95 (0.88)	4.31 (1.56)	4.09 (1.69)	3.05 (1.85)	2.38 (1.53)	3.89 (1.52)	2.01 (1.22)	5.36 (1.40)	4.18 (1.31)		
Diploma/Certificate	3.95 (0.85)	4.03 (1.58)	3.87 (1.64)	2.43 (1.65)	2.06 (1.42)	3.66 (1.55)	2.03 (1.23)	5.56 (1.28)	4.28 (1.36)		
Bachelor's Degree	4.06 (0.87)	4.18 (1.52)	3.91 (1.57)	2.59 (1.71)	2.12 (1.37)	3.97 (1.58)	2.16 (1.20)	5.47 (1.27)	4.35 (1.39)		
Honours/Masters	4.09 (0.90)	3.98 (1.56)	3.90 (1.55)	2.16 (1.30)	2.16 (1.39)	3.86 (1.60)	2.33 (1.34)	5.44 (1.38)	4.67 (1.26)		
PhD	4.24 (0.68)	3.53 (1.60)	3.57 (1.54)	2.05 (1.24)	1.60 (1.09)	3.61 (1.34)	2.21 (1.10)	5.48 (1.29)	4.38 (1.52)		
Religious Belief											
Atheist	4.13 (0.81)	4.06 (1.55)	3.86 (1.57)	2.57 (1.69)	2.03 (1.34)	3.88 (1.52)	2.13 (1.23)	5.49 (1.26)	4.31 (1.37)		
Spiritual but not Religious	4.04 (0.88)	4.20 (1.50)	3.93 (1.64)	2.71 (1.74)	2.21 (1.43)	3.72 (1.55)	2.11 (1.25)	5.58 (1.28)	4.34 (1.34)		
Religious	3.51 (0.92)	4.27 (1.78)	4.46 (1.67)	2.81 (1.81)	2.62 (1.74)	4.05 (1.61)	2.03 (1.21)	4.83 (1.66)	4.33 (1.33)		
Country Attitudes											
Unchanged Supportive	4.04 (0.83)	4.12 (1.55)	3.92 (1.62)	2.67 (1.73)	2.15 (1.42)	3.82 (1.55)	2.10 (1.22)	5.47 (1.32)	4.35 (1.34)		
Supportive to Rejecting	3.42 (0.12)	-	-	-	-	-	-	-	-		
Rejecting to Supportive	3.91 (1.07)	4.35 (1.80)	4.13 (1.71)	2.13 (1.62)	2.49 (1.60)	4.10 (1.55)	2.39 (1.46)	5.45 (1.38)	4.41 (1.33)		
Unchanged Rejecting	2.84 (1.10)	5.05 (1.19)	5.31 (1.27)	3.31 (1.87)	3.54 (1.90)	3.79 (1.53)	1.67 (0.85)	4.23 (1.83)	3.58 (1.33)		
Area Living In											
Rural area	3.56 (0.89)	4.19 (1.84)	4.41 (2.02)	2.60 (1.79)	2.40 (1.72)	4.30 (1.70)	1.90 (1.08)	5.47 (1.36)	3.93 (1.31)		
Small town	3.70 (0.86)	4.40 (1.66)	4.26 (1.60)	2.83 (1.85)	2.52 (1.58)	4.01 (1.57)	1.77 (0.87)	5.26 (1.46)	4.17 (1.41)		
Metropolitan area	4.13 (0.85)	4.09 (1.51)	3.86 (1.59)	2.62 (1.69)	2.09 (1.37)	3.75 (1.52)	2.20 (1.30)	5.49 (1.31)	4.39 (1.33)		

Table iii.

Inferential statistics of the association between demographic details and sexual identity continuum, psychological well-being, the LGBIS subscales and other identity-related factors.

	Gender			Age			Education		
	F	p	effect	F	p	effect	F	p	effect
Positive Affect	23.04	<.001	.193	9.19	<.001	.292	20.16	<.001	.280
Negative Affect	24.19	<.001	.197	13.84	<.001	.350	25.75	<.001	.312
Anger	8.09	<.001	.115	8.56	<.001	.281	16.93	<.001	.257
Self-Esteem	1.30	0.274	.047	2.77	.001	.166	4.00	0.001	.129
Life Satisfaction	19.50	<.001	.176	7.15	<.001	.258	20.48	<.001	.279
General Happiness	23.37	<.001	.192	7.43	<.001	.262	14.38	<.001	.237
Acceptance Concerns	2.61	0.074	.087	2.91	.001	.214	1.80	0.110	.115
Concealment Motivation	0.74	0.476	.047	1.79	0.053	.169	0.83	0.529	.078
Identity Uncertainty	7.17	0.001	.143	3.49	<.001	.232	6.21	<.001	.209
Internalised Homonegativity	5.52	0.004	.127	1.32	0.208	.146	2.02	0.074	.121
Difficult Process	5.07	0.007	.130	1.41	0.162	.161	1.28	0.269	.104
Identity Superiority	2.25	0.106	.081	1.14	0.330	.135	1.43	0.212	.102
Identity Affirmation	5.18	0.006	.123	1.72	0.065	.166	0.42	0.834	.056
Identity Centrality	7.92	<.001	.157	0.94	0.504	.129	1.86	0.100	.122
Presumption of Heterosexuality	47.72	<.001	.251	1.17	0.298	.099	2.92	0.012	.101
Environmental Acceptance	2.06	0.128	.053	1.79	0.045	.121	2.52	0.028	.093
Identity Disclosure	2.15	0.117	.072	9.19	<.001	.332	7.72	<.001	.212

Table iii. (Continued)
Inferential statistics of the association between demographic details and sexual identity continuum, psychological well-being, the LGBIS subscales and other identity-related factors.

	Religion			Country Attitudes			Area Live In		
	F	p	effect	F	p	effect	F	p	effect
Positive Affect	1.88	0.153	.056	1.78	.157	.066	0.81	0.444	.037
Negative Affect	0.27	0.765	.021	2.79	.039	.084	1.12	0.327	.043
Anger	2.70	0.068	.067	0.39	.757	.031	1.51	0.221	.050
Self-Esteem	0.04	0.966	.008	0.36	.783	.030	0.59	0.557	.031
Life Satisfaction	2.02	0.133	.058	3.93	.008	.099	1.13	0.322	.043
General Happiness	0.08	0.921	.012	1.90	.118	.070	1.37	0.255	.047
Acceptance Concerns	0.85	0.427	.050	2.49	.083	.086	1.99	0.138	.076
Concealment Motivation	4.47	0.012	.114	4.82	.008	.119	4.53	0.011	.115
Identity Uncertainty	0.86	0.424	.050	2.20	.112	.080	0.78	0.459	.048
Internalised Homonegativity	5.60	0.004	.128	6.66	.001	.139	5.14	0.006	.122
Difficult Process	1.51	0.221	.071	0.38	.683	.036	2.66	0.071	.094
Identity Superiority	0.21	0.812	.025	1.54	.216	.067	7.08	0.001	.143
Identity Affirmation	10.67	<.001	.175	5.56	.004	.127	1.58	0.207	.068
Identity Centrality	0.05	0.955	.012	2.09	.124	.082	2.61	0.075	.091
Presumption of Heterosexuality	2.58	0.076	.060	3.67	.012	.088	0.69	0.500	.031
Environmental Acceptance	37.53	<.001	.223	18.26	<.001	.192	41.97	<.001	.235
Identity Disclosure	4.98	0.007	.109	8.26	<.001	.141	3.02	0.049	.085

Appendix G: Research Case Study

Case Report 5: Doctoral Research Case Study

Tamara Bejakovich

24th November 2016

Submitted in partial fulfilment of the requirements for the Doctor of Clinical
Psychology Internship

Word Count: 6,959

*This case study was completed during the period of my internship and is my own
work.*

Signature:

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Abstract

Research on sexual identity development appears to suggest as an individual learns about their identity their well-being increases in a linear manner. This, however, is not always the case. Minority Stress theory suggests that internal and external stressors account for the disparities in well-being between heterosexual and lesbian, gay, bisexual and questioning (LGBQ+) identities. Upon review of the literature, however, no studies have directly investigated how controlling for these stressors influences the relationship between sexual identity development and psychological well-being. For this reason, the present study aimed to: first, examine the differences in well-being between people in different phases of McCarn and Fassinger's model (1996) of sexual identity development; second, investigate the differences in identity-specific factors, such as identity confusion, between the different phases; and third, to see whether controlling for identity-specific factors eliminates significant differences in well-being between people in different phases of development. These aims were explored utilising an online survey, including: Fassinger Questionnaires; Lesbian, Gay, and Bisexual Identity Scale; Outness Inventory; Affectometer 2; Rosenberg Self-Esteem Scale; and PROMIS Anger Scale. This study found that individuals in the Synthesis phase of either the individual or group developmental branch typically reported significantly higher levels of psychological well-being. These individuals also, generally, endorsed higher positive identity-specific variables, such as identity affirmation, and lower levels of negative identity-specific factors, such as identity confusion. Finally, once these variables were controlled, the significant differences in well-being between the phases were reduced. Future research should also investigate external stressors, such as experiences of discrimination, to determine how these stressors influence the relationship between development and well-being.

Note: In accordance with Code of Ethics for Psychologists working in Aotearoa/New Zealand (Code of Ethics Review Group, 2002), this research has considered the influence of the research onto its participants. The research has followed Massey University Human Ethics Committee protocol. Peer review deemed this research as Low Risk and a Notification was made to the Ethics Committee.

The Ups and Downs of Development: Sexual identity development, identity dimensions, and their association to psychological well-being

Identity development plays an important role in psychological outcomes, and lacking a sense of identity can result in lower levels of psychological well-being (Konik & Stewart, 2004; Rosario, Schrimshaw & Hunter, 2011). This is true for various identities that individuals develop throughout the lifespan, including their sexual identity. The developmental process is a complex interaction between biology, psychology and culture, resulting in a decision-making process to define one's identity (Hammack, 2005). Sexual identity is a recognition and internalisation of consistent meanings of one's sexual behaviour and orientation (i.e., attractions and fantasies) (Dillon, Worthington & Moradi, 2011; Savin-Williams, 1990). Unlike more common developmental models (e.g. Cass, 1979), McCarn and Fassinger (1996) describe a model of development separating personal and group identity development, referring to each new part of development as a phase, and so highlighting the blurred lines between developmental stages. This model does not presume the developmental pathway is linear or that it has an endpoint. Rather it states that with new information, whether a new context or relationship, sexual identity is re-considered and re-defined. This model describes four phases – Awareness, Exploration, Deepening/Commitment and Synthesis – within the two developmental branches (i.e., the individual and group developmental branches).

In the Awareness phase of the individual branch, individuals notice that their experiences do not conform to societal norms. This newfound understanding may be a general awareness of difference or a specific understanding that their emotions or desires diverge from others. In the Exploration phase, people begin to explore their emotional and sexual attractions for members of the same sex (in addition to exploration of opposite sex partners), raising many questions and leading to greater understandings of their personal experiences. A decision is made surrounding one's identity, which may or may not include embracing a label to define their identity. This is the Deepening/Commitment phase. Once these decisions surrounding identity have been made the individual internalises their personal identity, increasing self-acceptance and identity certainty. This is referred to the Synthesis phase.

In the Awareness phase of the group developmental branch, the individual realises heterosexual identity is not mandatory, and learns about the presence of individuals and

communities with lesbian, gay, bisexual, questioning and other (LGBQ+) identities. The individual then attempts to attain information on the LGBQ+ community and its members; for instance, they may become a member of internet groups. This is the Exploration phase of the group developmental branch. The next phase in each branch is called Deepening/Commitment. This phase is characterised by an increased awareness of the oppression felt by people with LGBQ+ identities and other societal attitudes. The Synthesis phase is characterised by a readiness to become involved with LGBQ+ communities, internalising their group definition into their social identity as a whole (McCarn & Fassinger, 1996).

McCarn and Fassinger (1996) suggested that sexual identity development does not require the attainment of a label, such as lesbian or bisexual. This freedom of a label is novel in stage/phase models of identity development and is consistent with research suggesting not all people require a label to benefit from identity development (Diamond, 2006). Another novelty of this model is its hesitation to combine personal and group identity development. Although the authors suggest it is unlikely that an individual would progress through one pathway without movement in the other, they suggest group identity development is significantly affected by the individual's context, such as the presence of discrimination and persecution. Hence, there may be no delay in personal identity development, despite the lack of exploration of and participation in LGBQ+ communities. McCarn and Fassinger (1996) also state that despite the appearance of linearity, this model may occur many times over a person's lifetime, suggesting a circular developmental pathway.

As described by McCarn and Fassinger, as well as other models, identity development moves an individual from a space of uncertainty and instability to a sense of clarity and self-acceptance. It has therefore long been thought development positively influences psychological well-being. For example, Moe, Dupuy and Laux (2008) demonstrated internalisation of one's sexual identity was positively associated with hope, optimism and purpose in life. Feldman and Wright (2013) found a positive relationship between development and self-esteem. Research which explores how each developmental phase/stage is associated with psychological well-being demonstrated a non-linear relationship between development and well-being. For instance, Swann and Spivey (2004) found that only the final phases of McCarn and Fassinger's model were positively associated with self-esteem, suggesting it is the internalisation of one's sexual identity into

their global identity which positively influences one's well-being. Another study investigating Cass's model found there is a reduction in psychological well-being of people in the middle stages of development. The authors suggested factors associated with development, such as internalised heterosexism and identity disclosure, may explain this unexpected trend (Halpin & Allen, 2004). This is consistent with the Minority Stress theory that proposes stressors associated to a "minority" identity, such as LGBQ+ identities, and so are likely to report lower levels of psychological well-being (Meyer, 2003).

Wright and Perry (2006) also suggest different dimensions related to minority sexual identities (i.e. those who do not identify as heterosexual) vary in level throughout development. It is, therefore, possible that these varying levels of sexual identity specific dimensions, such as identity confusion, contribute to varying levels of psychological well-being throughout development. In support of this claim, factors associated with LGBQ+ identities also have an impact on psychological well-being. For instance, incongruence between self-reported identity and sexual behaviours were associated with more negative health outcomes when compared to those with congruent identification (Schick, Rosenberger, Herbenick, Calabrese & Reece, 2012). Other implicated dimensions include identity confusion, identity disclosure, acceptance concerns, concealment motivation, and internalised homonegativity, among others (e.g., Mohr & Kendra, 2011). According to Meyer (2003), the Minority Stress theory claims that internal/proximal (i.e. subjective interpretation of external pressures on LGBQ+ identities, such as internalised heterosexism) and external/distal (i.e. external, objective events or conditions, such as prejudice or discrimination) stressors can account for the health disparities between heterosexual and LGBQ+ identities. Despite this, few studies have explored how these sexual identity-related dimensions affect the relationship between sexual identity development and psychological well-being.

Present Study

Due to the complex relationship between psychological well-being and sexual identity development, this study aimed to investigate how each phase of McCarn and Fassinger's model was related to well-being. In order to enhance current understandings of this complex relationship, this study incorporated a number of dimensions associated with LGBQ+ identities. The Lesbian Gay Bisexual Identity Scale (LGBIS) measures eight such

dimensions which are related to LGBQ+ identities. These dimensions and identity disclosure – as the literature suggests it influences the well-being of LGBQ+ people – were incorporated in order to explore how they influence the relationship between the phases of development and psychological well-being. More specifically, it aimed to determine whether the relationship between phases of development and well-being would be reduced or eliminated once taking such identity-related dimensions into account. This research, therefore, had the following hypotheses:

Hypothesis 1: Based on past literature, such as Swann and Spivey (2004), people in earlier phases of sexual identity development were expected to have lower levels of well-being than those from later phases of the model.

Hypothesis 2: Based on past literature, such as Wright and Perry (2006), the levels of identity-related dimensions were expected to differ between people in differing phases of sexual identity development.

Hypothesis 3: Once controlling for identity-related dimensions – which significantly differed between developmental phases – it was hypothesised that the significant differences in well-being between developmental phases would be non-significant.

Method

Participants

The original online survey was open to all sexual identities, and so the original sample was 1,661. This study required participants to complete the sexual identity development questionnaire. The inclusion criteria excluded all individuals identifying as heterosexual or mostly heterosexual and those identifying their gender as other. This resulted in a final sample of 790 participants, consisting of 200 males and 590 females. The final sample ranged in age from 16 years of age to 75 and older, with over two thirds (70.5%) reporting they were 29 and younger. Also the sample was somewhat more educated than the general population. Table 1 presents the distribution of the final sample. Some participants did not answer the required items. These cases were treated as missing data in analysis by standard SPSS defaults (listwise deletion).

Table 1.
Distribution of demographic variables.

	N	(%)
Gender		
Male	340	23.2%
Female	1019	69.7%
Other	104	7.1%
Age		
16 – 19 years	317	21.5%
20 – 24 years	491	33.5%
25 – 29 years	211	14.4%
30 – 34 years	113	7.7%
35 – 39 years	76	5.2%
40 – 44 years	55	3.7%
45 – 49 years	43	2.9%
50 – 54 years	68	4.5%
55 – 59 years	50	3.4%
60 – 64 years	21	1.4%
65 – 69 years	11	0.7%
70 years and over	11	0.7%
Sexual Identity Categories		
Heterosexual	370	25.6%
Mostly Heterosexual	181	12.5%
Bisexual	216	15.0%
Mostly Gay/Lesbian	98	6.8%
Lesbian/Gay	264	18.3%
Questioning	70	4.6%
Other	66	4.6%
Pansexual	68	4.7%
Asexual	110	7.6%
Education		
Primary School	15	1.0%
High School	476	33.0%
Diploma/Certificate	291	20.2%
Bachelor's Degree	351	24.3%
Honours/Masters	255	17.7%
PhD	55	3.8%

Measures

Outness Inventory. The Outness Inventory is an 11 item measure assessing how open an individual is to about their life about their sexual identity to a range of people in their life. The scale ranged from 1 “definitely does NOT know about your sexual orientation status” to 7 “person definitely knows about your sexual orientation status, and it is OPENLY talked about”. The internal consistency of this measure has ranged from acceptable to excellent across a range of studies (Carden, 2009; Carvalho, Lewis, Derlega, Winstead & Viggiano, 2011; Mohr & Fassinger, 2003).

Developmental Phases. The Fassinger questionnaires have been developed to assign individuals to a phase in the individual and group developmental branches of the McCarn and Fassinger development model. These questionnaires were designed separately for male and female participants. Currently there is no appropriate questionnaire for individuals who do not identify as male or female and so these individuals were excluded from analysis. The reliability of these measures has ranged greatly over studies from low to good reliability (Feldman, 2012; Katz-wise, 2014; Risco, 2008). Feldman (2012) suggested this may be due to the multidimensional nature of sexual identity development phases. The internal consistency of the measures ranged from adequate to high in the current sample.

Procedure

Ethical consideration by peer review deemed this research low risk, requiring on ethical notification to the Massey University Human Ethics Committee on the 3rd of October 2014. Participants were then recruited using a number of online methods, primarily through social media (e.g. Facebook) and emailing lists (such as the postgraduate psychology graduate lists), as well as other methods, such as word of mouth and emailing a letter with the survey link to organisations (e.g. Rainbow Youth) and staff at other institutions (e.g. professors or senior lecturers) which asked these groups or individuals to distribute the online survey. The participants were provided with a website address which led them to the information page. This page introduced to the research and the researcher, as well as an overview of the survey itself. Consent was asked by the following statement: “*I have read and understood the information sheet for this study and consent to collection of my responses*”. If the participant consented they were given access to the survey. The survey began by asking participants to describe their demographic details, including their age, gender, education, and sexual identity. The participants were then asked to complete the following questionnaires: Outness Inventory; the Fassinger Identity Questionnaires (either Lesbian Identity Questionnaire or Gay Identity Questionnaire, depending on the gender of the participants); and Lesbian, Gay, Bisexual Identity Scale. Finally, participants were asked to complete the measures of psychological well-being, comprising of the Affectometer 2, Satisfaction with Life, General Happiness, and the PROMIS Emotional Distress—Anger—Short Form. Once completing these questionnaires, the participants were asked where they heard of the research and were provided with the researcher’s email address should they wish to provide comments or feedback. Finally, they were thanked for their participation.

Results

Hypothesis 1: Significant differences were predicted between the phases in regards to their well-being.

To investigate differences in psychological well-being between people in different phases of development, a series of ANOVAs were used. Hochberg's GT2 or Games-Howell post hoc procedures were utilised depending on the homogeneity of variances. Table 2 presents the descriptive statistics of the results and the inferential statistics can be seen in Table 4.

As seen in Table 4, all ANOVAs result were found to be significant, except those analysing differences in anger between men in different phases of group identity development and differences in general happiness between men in the individual identity branch. In male participants, post hoc analysis demonstrated no significant difference in self-esteem of people in the individual branch of development and in self-esteem, life satisfaction and general happiness in group developmental branch. Significant differences were found between the Awareness and Synthesis phases in terms of their positive affect, anger and negative affect. That is, men in the Awareness phase reported lower positive affect and higher levels of anger and negative affect. Men in the Commitment phases of individual development also reported higher levels of negative affect and lower life satisfaction than those in the Synthesis phases. In terms of the group developmental branch, men in the Exploration and Commitment phases reported lower levels of positive affect when compared to those in the Synthesis phase. Those in the Commitment phase also reported higher levels of negative affect than men in the Synthesis phase of group identity development.

In female participants, those in the Synthesis phase reported significantly higher levels of positive affect, life satisfaction and general happiness when compared to all other phases of individual identity development, as well as reporting lower levels of anger than all other phases. Those in the Synthesis phase also reported significantly lower levels of negative affect than women in the Awareness and Commitment phases, as well as endorsing higher levels of self-esteem than women in the Awareness phase. Significant pairwise differences found in women in different group identity phases primarily centred between the Commitment and Synthesis phase. That is, women in the Commitment phase of the group identity branch reported significantly lower levels of positive affect, self-

esteem, life satisfaction and general happiness when compared to those in the Synthesis phase. Those in the commitment phase also report significantly higher levels of negative affect and anger than women in the Synthesis phase. These results, therefore, demonstrate support for the hypothesis that there would be significant differences between phases of individual and group identity development.

Table 2.

Descriptive statistics of the individual developmental branch in terms of the psychological well-being variables.

Individual Developmental Branch									
Male Participants	N	Awareness		Exploration		Synthesis			
		M (SD)	95%CI	M (SD)	95%CI	M (SD)	95%CI		
Positive Affect	151	27.57	(3.26), 24.56 - 30.59	31.89	(5.23), 27.87 - 35.91	31.76	(6.06), 28.65 - 34.88	36.02	(6.31), 34.82 - 37.22
Negative Affect	153	34.29	(6.63)	29.67	(8.14)	30.53	(10.42)	24.32	(8.04)
Anger	154	18.00	(1.83), 16.31 - 19.69	14.44	(5.53), 10.20 - 18.69	13.82	(4.48), 11.52 - 16.12	13.03	(4.58), 12.15 - 13.90
Self-Esteem	152	25.43	(2.70), 22.93 - 27.92	25.44	(1.59), 24.22 - 26.67	25.69	(1.66), 24.80 - 26.57	26.75	(2.06), 26.35 - 27.14
Life Satisfaction	152	3.86	(1.57), 2.40 - 5.31	5.22	(1.20), 4.30 - 6.15	4.06	(1.52), 3.28 - 4.84	5.11	(1.14), 4.89 - 5.33
General Happiness	152	4.14	(1.35), 2.90 - 5.39	4.14	(1.35), 2.90 - 5.39	4.59	(1.70), 3.72 - 5.46	5.08	(1.50), 4.80 - 5.36
Female Participants	N	Awareness		Exploration		Synthesis			
		M (SD)	95%CI	M (SD)	95%CI	M (SD)	95%CI		
Positive Affect	452	28.98	(7.03), 26.73 - 31.22	31.66	(7.55), 29.18 - 34.14	31.58	(7.82), 29.74 - 33.42	34.96	(6.63), 34.18 - 35.74
Negative Affect	458	32.26	(9.18)	29.83	(10.75)	29.72	(8.92)	24.77	(7.72)
Anger	453	16.26	(4.72), 14.73 - 17.79	16.61	(4.69), 15.02 - 18.20	15.34	(4.04), 14.40 - 16.28	13.52	(4.15), 13.04 - 14.00
Self-Esteem	463	25.56	(2.49), 24.76 - 26.37	25.94	(2.06), 25.24 - 26.65	26.36	(2.57), 25.76 - 26.96	26.73	(1.93), 26.50 - 26.95
Life Satisfaction	453	4.03	(1.59), 3.52 - 4.53	4.34	(1.46), 3.86 - 4.82	4.51	(1.39), 4.19 - 4.83	5.12	(1.32), 4.97 - 5.27
General Happiness	465	4.23	(1.51), 3.74 - 4.71	4.16	(1.73), 3.59 - 4.73	4.31	(1.64), 3.93 - 4.69	5.15	(1.50), 4.98 - 5.32
Group Developmental Branch									
Male Participants	N	Awareness		Exploration		Synthesis			
		M (SD)	95%CI	M (SD)	95%CI	M (SD)	95%CI		
Positive Affect	151	35.67	(4.03), 32.57 - 38.77	28.33	(8.25), 21.99 - 34.67	31.67	(5.76), 29.05 - 34.29	35.97	(6.15), 34.77 - 37.17
Negative Affect	153	29.11	(8.33)	33.11	(9.82)	30.71	(8.36)	24.00	(8.06)
Anger	154	14.11	(5.78), 9.67 - 18.55	14.44	(6.58), 9.39 - 19.50	15.00	(4.65), 12.88 - 17.12	13.00	(4.31), 12.15 - 13.85
Self-Esteem	152	26.56	(1.51), 25.40 - 27.72	25.56	(2.46), 23.67 - 27.44	25.45	(2.06), 24.48 - 26.42	26.75	(2.02), 26.35 - 27.15
Life Satisfaction	152	5.44	(1.24), 4.49 - 6.39	3.89	(1.96), 2.38 - 5.40	4.52	(1.21), 3.97 - 5.07	5.06	(1.17), 4.83 - 5.29
General Happiness	152	4.44	(1.59), 3.22 - 5.67	3.78	(1.99), 2.25 - 5.30	4.48	(1.60), 3.75 - 5.20	5.15	(1.42), 4.88 - 5.43
Female Participants	N	Awareness		Exploration		Synthesis			
		M (SD)	95%CI	M (SD)	95%CI	M (SD)	95%CI		
Positive Affect	452	30.77	(6.53), 26.82 - 34.72	31.87	(7.51), 29.82 - 33.92	29.11	(7.07), 27.23 - 30.98	34.75	(6.85), 33.98 - 35.52
Negative Affect	458	28.85	(5.96)	29.45	(9.84)	32.13	(8.51)	25.24	(8.19)
Anger	453	15.08	(4.25), 12.51 - 17.65	15.06	(5.10), 13.66 - 16.45	16.88	(4.74), 15.63 - 18.12	13.66	(3.99), 13.22 - 14.11
Self-Esteem	463	26.42	(2.07), 25.10 - 27.73	26.25	(2.07), 25.67 - 26.82	25.59	(2.35), 24.97 - 26.20	26.71	(2.06), 26.48 - 26.94
Life Satisfaction	453	4.77	(.73), 4.33 - 5.21	4.65	(1.35), 4.29 - 5.02	4.14	(1.33), 3.79 - 4.49	5.02	(1.42), 4.86 - 5.18
General Happiness	465	5.08	(1.12), 4.40 - 5.75	4.31	(1.72), 3.84 - 4.77	3.98	(1.53), 3.58 - 4.38	5.06	(1.54), 4.89 - 5.23

Table 3.

Inferential statistics of ANCOVA analysis of the differences in psychological well-being variables between phases of individual and group developmental branches.

	Individual Branch	Developmental Group Developmental Branch		
	F statistic	r	F statistic	r
Positive Affect				
Male	6.77*** ^a	.36	6.47*** ^a	.35
Female	12.44*** ^a	.28	12.55*** ^a	.28
Negative Affect				
Male	5.37*** ^c	.31	4.80** ^c	.31
Female	9.85*** ^c	.25	11.93*** ^c	.26
Anger				
Male	2.83* ^a	.24	1.31	.17
Female	11.12*** ^a	.27	10.20*** ^b	.26
Self-Esteem				
Male	2.84* ^a	.24	2.98* ^a	.25
Female	4.56** ^b	.18	4.92**	.18
Life Satisfaction				
Male	5.78*** ^a	.33	3.75* ^b	.27
Female	11.83*** ^a	.27	7.05*** ^a	.21
General Happiness				
Male	1.93	.20	3.52* ^a	.27
Female	11.34*** ^a	.21	10.22*** ^a	.26

Note: a = Gabriel Hochberg's GT2 procedure; b = Games-Howell procedure; c = Sidak procedure

* $p < .05$; ** $p < .01$; *** $p < .001$

Hypothesis 2: Identity-specific dimensions were hypothesised to differ between the phases of development

To examine whether the LGBIS subscales differ between people in different phases of individual and group identity development a series of ANOVAs were conducted. Depending on whether the homogeneity of variances was significant, the post hoc procedure utilised was either the Hochberg's GT2 or Games-Howell. The descriptive statistics can be seen in Tables 4 and 5, and the inferential statistics have been presented in Table 6. These findings provide support for the hypothesis that the identity-specific dimensions vary in level across development.

Table 4.

Descriptive statistics of the individual developmental branch in terms of their LGBIS subscales.

Male Participants	N	Individual Developmental Branch			M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI
		Awareness M (SD), 95%CI	Exploration M (SD), 95%CI	Commitment M (SD), 95%CI			
Acceptance Concerns	141	5.38 (0.71), 4.73 - 6.03	4.81 (1.88), 3.37 - 6.26	4.31 (1.68), 3.38 - 5.24	3.73 (1.57), 3.43 - 4.02		
Concealment Motivation	142	5.57 (1.79), 3.91 - 7.23	5.17 (1.69), 3.95 - 6.38	4.83 (1.89), 3.83 - 5.84	3.59 (1.53), 3.30 - 3.88		
Identity Confusion	143	4.86 (2.01), 2.99 - 6.72	4.20 (1.76), 2.94 - 5.46	3.36 (1.84), 2.38 - 4.34	1.86 (1.12), 1.65 - 2.07		
Internalised Homonegativity	144	3.81 (1.73), 2.21 - 5.41	3.57 (1.76), 2.30 - 4.83	2.98 (2.14), 1.88 - 4.08	2.13 (1.31), 1.88 - 2.38		
Difficult Process	118	4.44 (1.67), 2.69 - 6.20	4.07 (1.51), 2.98 - 5.15	4.48 (1.61), 3.55 - 5.41	3.94 (1.57), 3.61 - 4.27		
Identity Superiority	143	2.33 (1.44), 1.00 - 3.67	2.63 (1.91), 1.27 - 4.00	1.83 (1.17), 1.21 - 2.46	2.24 (1.26), 2.00 - 2.48		
Identity Affirmation	143	4.38 (0.45), 3.97-4.80	4.10 (1.58), 2.97-5.23	4.27 (1.85), 3.29 - 5.25	5.65 (1.24), 5.41 - 5.88		
Identity Centrality	129	3.09 (1.39), 1.80-4.38	3.53 (1.69), 2.11 - 4.94	3.59 (1.34), 2.85 - 4.33	4.42 (1.31), 4.16 - 4.69		
Identity Disclosure	149	2.24 (.99), 1.33 - 3.15	2.36 (1.28), 1.44 - 3.28	2.57 (1.44), 1.88 - 3.27	4.33 (1.60), 4.03 - 4.63		
Female Participants		N	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI
Acceptance Concerns	436	4.92 (1.59), 4.41 - 5.44	4.41 (1.56), 3.88 - 4.94	4.63 (1.57), 4.26 - 4.99	3.91 (1.51), 3.73 - 4.08		
Concealment Motivation	438	5.16 (1.37), 4.72 - 5.60	4.93 (1.54), 4.41 - 5.45	4.63 (1.55), 4.26 - 4.99	3.58 (1.55), 3.40 - 3.76		
Identity Confusion	435	4.74 (1.62), 4.22 - 5.26	4.54 (1.73), 3.96 - 5.13	3.29 (1.71), 2.89 - 3.69	2.26 (1.48), 2.09 - 2.43		
Internalised Homonegativity	436	3.46 (1.78), 2.88 - 4.04	2.61 (1.49), 2.11 - 3.12	2.61 (1.64), 2.22 - 2.99	1.89 (1.23), 1.74 - 2.03		
Difficult Process	289	4.55 (1.26), 4.14 - 4.95	4.17 (1.24), 3.73 - 4.61	4.22 (1.43), 3.87 - 4.56	3.63 (1.56), 3.43 - 3.82		
Identity Superiority	435	1.88 (1.20), 1.49 - 2.26	1.89 (1.04), 1.53 - 2.24	1.91 (1.19), 1.63 - 2.19	2.10 (1.16), 1.96 - 2.23		
Identity Affirmation	435	4.40 (1.45), 3.94 - 4.86	4.69 (1.39), 4.22 - 5.17	5.05 (1.22), 4.76 - 5.34	5.71 (1.18), 5.57 - 5.84		
Identity Centrality	398	3.53 (0.99), 3.19 - 3.86	3.49 (1.20), 3.05 - 3.94	4.13 (1.27), 3.82 - 4.44	4.45 (1.32), 4.29 - 4.61		
Identity Disclosure	456	2.28 (1.01), 1.96 - 2.59	2.36 (1.29), 1.93 - 2.78	3.33 (1.50), 2.99 - 3.67	4.08 (1.56), 3.90 - 4.26		

Table 5.

Descriptive statistics of the group developmental branch in terms of their LGBIS subscales.

Male Participants	Group Developmental Branch						Synthesis M (SD), 95%CI	
	N	M (SD), 95%CI	Awareness	M (SD), 95%CI	Exploration	M (SD), 95%CI	Commitment	M (SD), 95%CI
Acceptance Concerns	141	4.59 (1.49), 3.45 - 5.74	4.96 (1.59), 3.74 - 6.18	4.73 (1.67), 3.95 - 5.51	3.64 (1.54), 3.34 - 3.94			
Concealment Motivation	142	5.23 (1.57), 4.11 - 6.36	4.96 (1.36), 3.82 - 6.10	4.23 (1.82), 3.38 - 5.08	3.68 (1.65), 3.36 - 4.00			
Identity Confusion	143	3.48 (1.72), 2.25 - 4.70	4.19 (2.09), 2.59 - 5.80	2.61 (1.83), 1.76 - 3.47	2.02 (1.32), 1.76 - 2.27			
Internalised Homonegativity	144	4.27 (1.98), 2.85 - 5.68	2.78 (1.18), 1.87 - 3.68	2.68 (1.89), 1.82 - 3.54	2.14 (1.35), 1.88 - 2.41			
Difficult Process	118	4.57 (1.74), 3.32 - 5.81	4.44 (1.45), 3.33 - 5.56	4.37 (1.83), 3.43 - 5.31	3.86 (1.49), 3.53 - 4.19			
Identity Superiority	143	1.70 (0.85), 1.09 - 2.31	2.59 (1.67), 1.31 - 3.88	2.28 (1.69), 1.49 - 3.07	2.24 (1.24), 2.00 - 2.48			
Identity Affirmation	143	3.77 (1.17), 2.93 - 4.60	4.96 (1.09), 4.13 - 5.80	4.60 (2.04), 3.65 - 5.55	5.64 (1.18), 5.41 - 5.87			
Identity Centrality	129	3.53 (1.65), 2.27 - 4.80	4.05 (1.46), 2.83 - 5.27	4.51 (1.66), 3.73 - 5.29	4.21 (1.30), 3.94 - 4.48			
Identity Disclosure	149	2.15 (1.40), 1.15 - 3.15	2.34 (1.17), 1.50 - 3.18	3.48 (1.69), 2.71 - 4.25	4.25 (1.62), 3.94 - 4.56			
Female Participants								
	N	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI	M (SD), 95%CI
Acceptance Concerns	435	5.20 (1.19), 4.54 - 5.86	5.10 (1.39), 4.70 - 5.50	5.25 (1.56), 4.84 - 5.66	3.75 (1.43), 3.59 - 3.91			
Concealment Motivation	435	4.91 (1.04), 4.33 - 5.49	5.21 (1.47), 4.79 - 5.63	4.76 (1.74), 4.31 - 5.22	3.65 (1.53), 3.48 - 3.82			
Identity Confusion	435	4.53 (1.47), 3.72 - 5.35	3.74 (1.95), 3.19 - 4.29	2.96 (1.81), 2.48 - 3.45	2.61 (1.69), 2.42 - 2.80			
Internalised Homonegativity	434	3.33 (2.08), 2.18 - 4.48	2.55 (1.70), 2.06 - 3.03	2.73 (1.84), 2.25 - 3.21	2.00 (1.25), 1.86 - 2.14			
Difficult Process	287	4.00 (1.42), 3.18 - 4.82	4.83 (1.31), 4.44 - 5.22	4.67 (1.46), 4.28 - 5.07	3.52 (1.43), 3.35 - 3.69			
Identity Superiority	435	1.93 (0.97), 1.40 - 2.47	2.08 (1.23), 1.74 - 2.43	2.78 (1.54), 2.37 - 3.18	1.88 (1.02), 1.77 - 2.00			
Identity Affirmation	435	4.38 (1.66), 3.46 - 5.30	5.28 (1.42), 4.88 - 5.68	5.47 (1.41), 5.09 - 5.84	5.46 (1.25), 5.32 - 5.59			
Identity Centrality	396	3.63 (1.72), 2.54 - 4.72	4.30 (1.15), 3.96 - 4.64	4.50 (1.45), 4.09 - 4.91	4.21 (1.31), 4.06 - 4.37			
Identity Disclosure	460	2.47 (1.50), 2.77 - 4.78	2.69 (1.43), 3.61 - 4.51	3.16 (1.38), 4.28 - 4.98	3.92 (1.60), 4.59 - 4.86			

Table 6 presented ANOVA results, demonstrating few non-significant findings. Identity Superiority did not significantly differ between men in different phases of either the individual or group developmental branch, or between women in different phases of the individual branch. Other non-significant findings include differences in the Difficult Process variable for men in differing phases of either the individual or group identity branch, and differences in the Identity Centrality variable between people (either male or female) in different phases of the group developmental branch. The remaining ANOVA results were found to be significant, with effect sizes ranging from small to large.

In male participants, post hoc analysis of the differences between the phases of individual identity development in Internalised Homonegativity and Identity Centrality did not find any significant pairwise comparisons. Post hoc analysis of the remaining variables demonstrated men in the Synthesis phase of the individual developmental branch reported significantly less Concealment Motivation, Identity Confusion, and Identity Disclosure when compared to all other phases of individual identity development. Additionally, men in the Synthesis phase also reported significantly less Acceptance Concerns than those in the Awareness phase, and significantly more Identity Affirmation when compared to the Commitment phase of the individual branch.

Post hoc analysis in the group developmental branch demonstrated men in the Awareness phase reported significantly more Concealment Motivation and Internalised Homonegativity, and significantly less Identity Affirmation and Identity disclosure when compared to men in the Synthesis phase. In addition, those in the Commitment phase endorsed significantly higher levels of Acceptance Concerns, and men in the Exploration phase reported lower levels of Identity disclosure than those in the Synthesis phase. No significant pairwise comparisons were found in the reported level of Identity Confusion.

Post hoc analyses in female participants demonstrate similar results. As seen in Tables 4 and 5, women in the Synthesis phase of the individual branch reported lower levels of Acceptance Concerns, Concealment Motivation, Identity Confusion and Internalised Homonegativity, and higher levels of Identity Affirmation and Identity Disclosure when compared to the other phases of individual identity development. Additionally, women in the Commitment phase reported higher Identity Disclosure than the Awareness and Exploration phase, but lower than those in the Synthesis phase. Those in the Synthesis phase also endorsed higher Identity Centrality than those in the Awareness

and Exploration phases, as well as reporting lower levels of Difficult Process than women in the Awareness and Commitment phases.

Post hoc analysis in the group developmental branch demonstrated women in the Synthesis phase report lower Acceptance Concerns and Concealment Motivation, and higher Identity Disclosure when compared to the remainder of phases. Additionally, those in the Synthesis phase endorse lower levels of identity uncertainty than women in the Awareness and Exploration phases. Women in the Synthesis phase also report lower Internalised Homonegativity than those in the Commitment phase, and lower levels of Difficult Process and higher Identity Affirmation when compared to those in the Exploration and Commitment phase. Those in the Commitment phase also endorsed lower Identity Confusion than those in the Awareness phase, and higher levels of Identity Superiority than those in the Synthesis phase.

Table 6.

Inferential statistics of ANCOVA analysis of the differences in LGBIS subscales and identity disclosure between phases of individual and group developmental branches.

	Individual Branch	Developmental		Group Developmental Branch
		F statistic	r	
Acceptance Concerns				
Male	3.82** ^a	0.28	4.80** ^a	0.31
Female	8.38*** ^a	0.23	29.51*** ^a	0.41
Concealment Motivation				
Male	7.80*** ^a	0.38	4.10** ^a	0.29
Female	23.17*** ^a	0.37	21.91*** ^a	0.36
Identity Confusion				
Male	23.30*** ^b	0.58	8.54*** ^b	0.39
Female	49.85*** ^a	0.51	11.29*** ^a	0.27
Internalised Homonegativity				
Male	6.28*** ^b	0.34	19.00*** ^b	0.34
Female	6.84*** ^b	0.36	8.88*** ^b	0.24
Difficult Process				
Male	0.61	0.13	1.19	0.17
Female	6.63*** ^b	0.22	18.15*** ^b	0.35
Identity Superiority				
Male	0.82	0.13	0.78	0.13
Female	1.02	0.08	10.31*** ^b	0.26
Identity Affirmation				
Male	9.67*** ^b	0.42	8.77*** ^b	0.40
Female	20.52*** ^a	0.35	3.44* ^a	0.15
Identity Centrality				
Male	4.25** ^a	0.30	1.56	0.11
Female	9.78*** ^a	0.26	1.05	0.16
Identity Disclosure				

Male	13.67*** ^a	0.47	9.40*** ^a	0.40
Female	30.78*** ^b	0.41	16.19*** ^a	0.31

Note: a = Gabriel Hochberg's GT2 procedure; b = Games-Howell procedure

* $p < .05$; ** $p < .01$ *** $p < .001$

Hypothesis 3: Controlling for identity-specific dimensions was expected to eliminate significant differences between phases of development

To test hypothesis 3, a series of ANCOVAs were performed where the identity-specific variables significantly (and producing a moderate effect size) related to well-being or the phases of development were placed as co-variates. The identity-specific factors placed as co-variates (i.e. those which produced moderate effect sizes in either analysis of their relationship with well-being or the phases of development) included: Acceptance Concerns, Concealment Motivation, Identity Confusion, Internalised Homonegativity, Identity Affirmation, Identity Centrality, and Identity Disclosure. The inferential statistics of these analyses can be seen in Table 8. The post hoc analysis incorporated the Sidak procedure.

Individual Developmental Branch

Results demonstrated, once controlling for the identity-related factors, the differences between phases of individual identity development was almost eliminated, with only one significant difference found. The difference occurred in the reported level of negative affect in men of different phases of individual development. Post hoc analysis did not reveal any significant pairwise comparisons, and the significant finding generated a small effect size.

Group Developmental Branch

ANCOVA results revealed the differences in negative affect, self-esteem and general happiness between phases of group identity development were no longer significant in male participants, once controlling for identity-specific factors. The differences in positive affect and life satisfactions remained significant in men. Post hoc results demonstrated the differences occurred between those in the Awareness and Exploration phase of group identity development, where well-being was higher in men in the Awareness phase. In female participants, differences in levels of anger and general happiness remained significant. These significant findings produced small effect sizes. Post

hoc analysis in the differences in reported level of anger revealed women in the Commitment phase of group identity development reported significantly more anger than those in the Synthesis phase. Post hoc analysis of levels of general happiness uncovered that women in the Awareness phases reported significantly higher levels of general happiness when compared to those in the Commitment phase of group identity development.

Table 7.

Inferential statistics of ANCOVA analysis of the differences in psychological well-being variables between the phases of sexual identity development.

	F statistic	p value	r
Positive Affect			
Male Individual Branch	1.94	.127	0.23
Male Group Branch	3.49*	.018	0.27
Female Individual Branch	1.93	.124	0.12
Female Group Branch	1.41	.239	0.11
Negative Affect			
Male Individual Branch	3.23*	.026	0.29
Male Group Branch	1.90	.133	0.20
Female Individual Branch	2.08	.103	0.13
Female Group Branch	2.47	.062	0.14
Anger			
Male Individual Branch	2.43	.070	0.26
Female Individual Branch	1.05	.369	0.09
Female Group Branch	3.05**	.029	0.16
Self-Esteem			
Male Individual Branch	1.92	.132	0.23
Male Group Branch	1.40	.245	0.18
Female Individual Branch	0.35	.793	0.05
Female Group Branch	0.28	.840	0.04
Life Satisfaction			
Male Individual Branch	1.60	.193	0.21
Male Group Branch	3.22*	.025	0.26
Female Individual Branch	1.32	.267	0.10
Female Group Branch	1.05	.371	0.09
General Happiness			
Male Group Branch	0.77	.509	0.13
Female Individual Branch	1.97	.118	0.12
Female Group Branch	3.31*	.020	0.16

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

Discussion

Identity development is thought to have a linear relationship with psychological well-being. It has been thought that as one learns more about oneself, they become more psychologically well. This, however, is not the case. The relationship between identity development and well-being is complex and influenced by a number of factors. Despite this, few studies have examined how different phase of development differ in reported level of psychological well-being. Furthermore, following review of the literature, no studies reviewed have explored how controlling for sexual identity-specific variables can reduce or eliminate these differences. For this reason, the present study aimed to: First, examine the differences in psychological well-being between the phases of McCarn and Fassinger's (1996) model of sexual identity development; second, explore the differences between people in these phases in terms of sexual identity-specific variables identified in past research; and third, to see if controlling for these variables reduces or eliminates the differences in well-being between the phases of individual and group identity development. Building on these aims, the present study had three hypotheses, which were supported by the results.

The first hypothesis proposed that people in earlier phases of sexual identity development would report lower levels of well-being than those from later phases of the model. This hypothesis was supported as the majority of significant pairwise comparisons demonstrated those in the Synthesis phase in either the individual or group developmental branch reported higher levels of psychological well-being. This is consistent with past research (e.g. Swann & Spivey, 2004), suggesting that internalisation of one's sexual identity into one's global identity has beneficial effects on psychological well-being, reducing levels of anger and negative affect and enhancing positive aspects of well-being, such as life satisfaction.

The second hypothesis posited that identity-related dimensions would differ between people in differing phases of sexual identity development. This was also supported by the results which demonstrated significant differences in the majority of identity-specific factors between the phases of individual and group identity development. Thus, this is also consistent with the literature (e.g. Wright & Perry, 2006).

The third hypothesis proposed significant differences in well-being between developmental phases would become non-significant when controlling for the identity-

related dimensions. This hypothesis was mostly supported as only five of the original 22 ANOVAs remained significant. In the remaining significant findings, the effect size of these ANCOVAs reduced suggesting some reduction in the relationship between the phase of identity development and psychological well-being.

It is important to note that although there were reductions in effect size for all the analyses, the reduction was not uniform. For example, differences in negative affect between the individual identity phases in men reduced by 0.02, whereas in women these differences reduced by 0.12 in effect size. This suggests that different identity-related factors may influence different psychological well-being variables to different degrees. For instance, life satisfaction may be more influenced than positive affect by Acceptance Concerns, and so is more greatly reduced by this variable. An alternative explanation may be that there may be an interaction effect of gender. For example, men may be more affected by external stressors, such as discrimination, than internal stressors, such as identity confusion, and so demonstrate less reduction overall than female participants. It is possible that the difference in reduction between variables may be due to the differences between the varied influences of internal processes on individual identity versus group identity development. That is, group identity development incorporates contextual factors and so may make an individual more vulnerable to external stressors, as well as not requiring active processing of internal conflicts, such as identity uncertainty, to the same extent, and so it has less impact on well-being. Another explanation is that this is an anomaly of analysis as co-variates were individualised for each ANCOVA in analysis, rather than using all as controls. Thus, the variation in reduction in effect size could be associated with the identity-specific factor utilised in the ANCOVA.

Regardless of explanation, this finding supports the proposition made by the Minority Stress theory which suggests disparities in well-being are created by stressors associated with a “minority” identity (Meyer, 2003). Future research should aim to explore these possible explanations to further dissect the influence of identity-specific factors on the relationship between the phases of development and psychological well-being.

Following review, no research articles were found that directly controlled for identity-specific variables to determine whether these may have an influence on the relationship between phases of development of sexual identity development and psychological well-being. Thus, this research produces novel information in this field.

However, this study utilised a convenience sample with computer-based recruitment and data collection. Future studies, therefore, should aim to use greater sampling tools to gain a more representative sample. Additionally, this study excluded individuals who did not have access to a computer or the internet, potentially excluding some socio-economic groups, cohorts, and/or groups with specific beliefs, such as limiting technology for religious reasons. This may include using various methods for participant recruitment and data collection, such as offering a paper-and-pen version of the survey. This study also did not investigate the role of external stressors, such as prejudice and discrimination, which may have a greater influence on individuals in differing phases of group identity development.

Clinical Implications

The present study demonstrated how sexual identity-specific factors differ across the phases of development. Enhancing understandings of how these factors peak and trough through development can help produce a framework for clinicians. This then may help improve clinicians' formulations of clients with LGBQ+ identities or simply provide them with dynamic factors they can be assessed and/or monitored when working with this client population. Doing so can raise cultural sensitivity to this almost invisible subculture.

Additionally, the present study highlighted how psychological well-being does not improve in a linear manner as one progresses through phases of development. Rather it is an individual's ability to internalise their identity that may have a protective effect on psychological well-being. This is important to be aware of as clinicians should remain on alert as a client explores and defines their identity (e.g. identity confusion, internalised homonegativity). This exploration may result in reductions of psychological well-being, such as gaining awareness of prejudices and discrimination toward people with LGBQ+ identities resulting in negative affect due to increased internalise homonegativity or concealment motivation. It is also important to note that, according to McCarn and Fassinger (1996), the sexual identity development process is not linear, and so with new contexts and relationships the individual may further explore and re-define their identity. This highlights the importance of ongoing assessment throughout working with clients in order to be alert for factors which may make clients vulnerable to psychological distress.

Conclusion

The present study demonstrated the Synthesis phase of individual and group identity development has protective effects on psychological well-being. Additionally, this study found that this phase is associated with lower levels of negative identity-specific variables, such as Acceptance Concerns and Concealment Motivation, and higher levels of positive variables, such as Identity Affirmation. By controlling for these factors, the effect sizes of the differences between phases of identity development were reduced, supporting claims made by the Minority Stress theory. These findings can be used to guide clinical formulation, assessment and therapy when working with clients identifying as LGBQ+.

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