

EXPERIENCEING BISEXUAL IDENTITY: THE EFFECT OF IDENTITY THREAT
AND IDENTITY VERIFICATION ON BISEXUAL INDIVIDUALS

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ABSTRACT

Bisexuality and bisexual identity are underrepresented within the realm of psychological research. For instance, when considering all of the journal articles published on the topic of same-sex experience, only 16% of those articles mention bisexuality in their title (Rosenthal, 2012). This underrepresentation of bisexuality within research appears even more disproportionate when one considers that reported rates of bisexuality are noticeably higher than reported rates of homosexuality, especially so among women under 30 (Diamond, 2008). This research was an attempt to remedy this disparity in knowledge, as well as to learn more about bisexual identity, identity uncertainty, and health and wellness outcomes associated with positive and negative identity experiences. Study One tested whether the construct of prototypicality from Self-Categorization Theory and Social Identity Theory applies to the social identity of bisexuality. I manipulated perception of bisexual prototypicality and measured how that affects positive and negative affect, individual and collective self-esteem, stress, and identity centrality and certainty. While the manipulation overall was not significant, there were marginally significant results that indicated participants in the high prototypicality condition had lower reports of self-esteem and identity certainty and centrality and higher reports of negative affect than their peers. Study Two investigated whether Identity Theory applies to bisexual identity, specifically whether identity verification results in positive affect and behaviors and identity threat results in negative affect and behaviors. Study Two was a longitudinal daily diary study that asked participants to record daily experiences of bisexual identity verification and identity threat, as well as positive and negative health behaviors. The results of the study did not support the hypothesis of

negative and positive identity events influencing affect and behaviors, but initial reports of negative affect, self-esteem, and identity certainty were related to initial status and change in stress and anxiety.

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Introduction

Research on bisexual individuals and bisexual experience is lacking within the field of psychology, and even within the study of sexual minorities. For instance, when considering all of the journal articles published on the topic of same-sex experience, only 16% of those articles mention bisexuality within their title (Rosenthal, 2012). This underrepresentation of bisexuality within research appears even more disproportionate when one considers that reported rates of bisexuality are noticeably higher than reported rates of homosexuality, especially among women under 30 (Diamond, 2008). One area in particular that is lacking sufficient exploration and investigation is how bisexual individuals experience their bi identity, both as a social identity and role identity. Social Identity Theory (SIT), Self-Categorization Theory (SCT), and Identity Theory (IT) all have a rich history of theorizing as to how social and role identities develop, how they are experienced by individuals and affect interpersonal or intergroup interaction, and predict various outcomes pertaining to health and wellness. Thus, these theories can possibly explain some of the unique identity experiences and health issues bisexual people face.

Specifically, there is some evidence that bisexual individuals may experience continued uncertainty after establishing a bisexual identity (Weinberg, Williams, & Pryor, 1994), given that bisexuality is a relatively unstable sexual identity in comparison to heterosexuality or homosexuality (Savin-Williams, Joyner, & Rieger, 2012).

Additionally, past research has found that bisexual women have poorer overall health than heterosexual or lesbian women (Cochran & Mays, 2009; Fredriksen-Goldsen, Kim, Barkan, Balsam, & Mincer, 2010), and higher levels of Generalized Anxiety Disorder

than their heterosexual and homosexual counterparts (Bostwick, Boyed, Hughes, & McCabe, 2010). Given these findings, it is important to identify potential contributing factors to identity uncertainty and instability as well as unique consequences such uncertainty may have for health outcomes.

The Social Identity Approach (which is inclusive of SIT and SCT, and will be outlined further below) proposes individuals adopt social identities to achieve positive benefits, such as positive self-distinction and self-esteem, and the reduction of uncertainty in life (Hogg, 2006; Hogg & Mullin, 1999; Stets & Burke, 2000). One of the primary cognitive mechanisms in order to make a social identity the salient level of identity is depersonalization, i.e. people perceive themselves and act as a part of a group as opposed to as an individual (Stets & Burke, 2000). In order to achieve depersonalization, and therefore adopt the relevant social identity, group members attempt to embody the group prototype, or the imagined representation that includes the defining traits of the group, as much as possible. However, due to the decentralized nature of bisexual identity, it may lack group entitativity, or cohesiveness, which may make it difficult for bisexual people to identify strong group prototypes to which they can adhere (Hogg, 2006). In other words, as there is a lot of variance in bisexual identity, it may not be possible to include all aspects into a prototype, so potentially many different bisexual people may feel they do not match a “mainstream” bisexual prototype.

Research indicates that unlike other sexual identities, bisexual individuals often experience continued uncertainty after adopting the bisexual label (McLean, 2007; Weinberg, Williams, & Pryor, 1994), which may be due to this lack of a strong prototype to prescribe defining group behaviors and characteristics. Thus, the uncertainty reduction

hypothesis (Hogg, 2004) may only be effective if 1) group members can identify a group prototype, and 2) they feel as though they match that prototype. Study One was developed to investigate the manipulation of individuals' perception in how closely they match that prototype, and the extent to which such a manipulation affects feelings of uncertainty and other emotions.

The identity verification process proposed by IT (which will be discussed in further detail below) states when an individual has her or his identity verified, meaning she or he is perceived by others in line with her or his self-perception of that identity, positive emotions ensue for that individual. If an identity is not verified, then an individual experiences negative emotions, including stress and anxiety (Burke & Stets, 2009). When identities are difficult to spot, the likelihood of not having that identity verified increases (Swann, 1983). Additionally, lower status identities are less likely to be verified by observers than are high status identities (Stets & Harrod, 2004). Third, if identity non-verification happens frequently, negative emotion is predicted to be more intense than when identities are infrequently threatened (Burke, 1996). Finally, if an individual experiences continuous identity non-verification, he or she may abandon that particular role identity (Burke & Stets, 1999). As one of the primary issues of the bisexual community is visibility and recognition of bisexuality as a legitimate and stable identity, I believe that bisexuality is a difficult identity for many people to perform and detect, which could result in frequent experiences of identity non-verification. Also, as a sexual minority bisexuality is lower in status, if defined as tolerance and acceptance of bisexuality, compared to heterosexuality, and in some instances, homosexuality (Eliason, 1997). This lower status may also contribute to an increased likelihood of identity non-

verification for bisexual individuals, and with frequent non-verification, bisexual identity may become more unstable. Study Two designed to investigate whether 1) bisexual people experience frequent identity non-verification in terms of their sexual identity, and if so, 2) whether there are long-term health and wellness consequences due to these disconfirmations, and 3) whether frequent non-verification leads to higher rates of identity uncertainty.

Background Literature

Social identity theory. SIT, or the “social psychological theory of intergroup relations, group processes, and the social self,” was developed over the second half of the 1900s, primarily by Henri Tajfel and John C. Turner (Hogg, Terry, & White, 1995, pg. 259). The theory was initially developed by Tajfel in order to study prejudice and discrimination, and was later expanded upon by Tajfel and Turner, among others, in the 1970s (Hogg, 2006; Hogg et al., 1995). SIT states that individuals develop social identities, which are understandings that one belongs to certain groups of people or categories, and those identifications become part of the self-concept (Hogg et al., 1995; Stets & Burke, 2000). When a social identity is activated, individuals begin acting as a member of the group, subscribing to prescribed normative group behaviors, as opposed to acting as a unique individual. This activation is not necessarily a loss of identity, but rather a change in identity perspective. Thus, when social identities are made salient, one’s perception of the self and actual group behaviors become normative and stereotypical as each member tries to embody definitive characteristics of the group with which they identify (Hogg et al., 1995; Stets & Burke, 2000).

SIT theorists contend that the process of social identification begins with categorizing the self and others into various groups (this process will be discussed in detail as a part of SCT below), which makes intergroup boundaries more salient. Initially, self-enhancement and positive distinction were thought to be the guiding force for categorization, as individuals would want to categorize themselves as members of groups that are perceived as being superior in comparison to relevant out-groups (Hogg, 2006; Hogg et al., 1995). There are currently several other motivational drives that are being tested, some of which are discussed below. The social identification process is still thought to depend upon “subjective belief structures,” which are an individual’s beliefs about the stability and legitimacy of group statuses, as well as the perceived possibility for social mobility (Hogg et al., 1995). This means that people make decisions as to whether they want to continue to identify with their current ingroup or attempt to change groups depending upon whether they perceive the status of their ingroup and relevant outgroups as both unchanging and truthful, and whether they feel as though group boundaries are permeable or not.

The initial motivation stated for adopting and maintaining a social identity was to attain positive distinction for the group, or to be seen in an evaluatively positive light in comparison to other groups, so group members could then maintain and enhance levels of self-esteem due to this positive comparison (Stets & Burke, 2000; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). However, as empirical studies have resulted in uneven support for this theory, researchers have moved on to consider other motivations for why people might engage in the establishment of social identities (Stets & Burke, 2000). For example, other motivations studied are collective self-esteem, which is one’s appraisal of

his or her social identity (Luhtanen & Crocker, 1992) and uncertainty reduction (Hogg, 2006). Collective self-esteem is measured via membership esteem, public collective self-esteem, private collective self-esteem, and the importance the collective identity is to individual identity. It may have a moderating effect on group level strategies, such as positive bias about one's ingroup (Luhtanen & Crocker, 1992).

Other social identity theorists propose that one reason individuals subscribe to social identities is to reduce the amount of uncertainty in one's life by prescribing appropriate behaviors for individuals within each group (Hogg, 2006; Hogg & Mullin, 1999). As people experience subjective uncertainty about who they and others are, they subscribe to social categories in order to conform their behavior to what is expected from that category (Hogg, 2006).

Self-categorization theory. As for the categorization aspect of SIT, we will now turn to SCT, which was developed by Turner and colleagues to further detail the categorization process for group behavior. Turner asserts that categorization is the foundation of group behavior (Turner et al., 1987), and through the process of categorization, intergroup boundaries are accentuated as group members begin to perceive their fellow ingroup members as more similar to themselves and to perceive differences between groups to be more distinct. This process is facilitated through group prototypicality and depersonalization (Hogg, 2006; Hogg et al., 1995; Stets & Burke, 2000; Turner et al., 1987). A group prototype is a real or imagined group member that embodies all of the definitive characteristics of the group (Hogg, 2006). For example, the prototypical member for the category of college student may be young, studious, and of above average social economic status. Prototypical members are not considered to be the

average group member, as they are to inhabit all of the group's characteristics, but rather as a shining example that other group members strive to mimic (Hogg, 2006). It is especially important that prototypes embody the characteristics of the group that clearly differentiate the group from relevant outgroups, and that these central characteristics are positive.

Once a group has a defined prototype, depersonalization can occur.

Depersonalization is the process that group members go through to change their identity perspective from that of an individual, or what is referred to as a person identity in SIT, to the group level. Thus, individuals are "perceived as, are reacted to, and act as embodiments of the relevant ingroup prototype rather than as unique individuals" (Hogg et al., 1995, pg. 261). Through depersonalization, the principle of metacontrast is accomplished. Intragroup differences are minimized, and intergroup differences are maximized.

While social identification often results in this group cohesion and increased salience of intergroup differences, not all groups or group members are always unified. Marques and colleagues have proposed that there also exist individuals or subgroups within in-groups that do not necessarily fit the group prototype, and yet they are still perceived as being part of the in-group (Marques, Abrams, Paez, & Hogg, 2001). In this case, such individuals or subgroups would be considered deviant group members, and may be susceptible to the black sheep effect (i.e., the process by which group members evaluate more prototypical members more positively and evaluate deviant group members more negatively). This negative evaluation of deviant group members can be so severe that other group members may actually evaluate members of relevant out-groups

more positively than their own deviant members, especially when the group norms that deviant group members violate are the defining characteristics that separate the in-group from other out-groups (Marques et al., 2001). Additionally, deviant members are not just disliked by other group members, but also can be portrayed as pathological or dysfunctional (Hogg, 2004).

Another obstacle to group cohesion is entitativity, or rather a lack of entitativity. The lack of entitativity is when group members perceive a social category to be less “groupy,” e.g. if group members perceive other ingroup members to be dissimilar from them, it may result in feeling a lack of group cohesiveness. Alternatively, if group members perceive their fellow ingroup members to be similar to them, then it may result in feeling like the group is cohesive (Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007). As the uncertainty reduction hypothesis claims that one of the primary motivations for adopting a social identity is to reduce the amount of uncertainty in one’s life, individuals are more likely to have a stronger identification with groups that are high in entitativity, and thus have strong prototypes, than groups low in entitativity with weaker prototypes (Hogg, 2004). Potentially, if bisexuality is perceived as having low entitativity, this could explain why people who identify as bisexual continue to experience uncertainty about their identity.

Identity Theory. Identity Theory is a sociological theory that seeks to explain the specific meanings that individuals have for the multiple identities they claim; how these identities relate to one another for any one person; how their identities influence their behavior, thoughts, and feelings or

emotions; and how their identities tie them in to society at large (Burke & Stets, 2009, pg. 3).

Where SIT attempts to explain identity in terms of how individuals organize and categorize themselves into relevant groups, and then derive self-meaning from those group identities, IT suggests that people inhabit role identities that are influenced by social structure and personal idiosyncrasies.

The development of IT can be traced back to Symbolic Interactionism (SI) (Blumer, 1962; Mead, 1934). The basic tenets of SI are that we create symbols which allow us to form a shared worldview and shared meanings, which are communicated through the interaction of people. As interactions are repeated, patterns of meaning emerge, and we are able to apply those patterns in order to name the self as well as relevant others. This implies that the self is reflexive, and people are able to consider the self much as they would any other person or object they come across (Burke & Stets, 2009).

Stryker (1980) expanded SI by adding the importance of social structure. Stryker (1980) noted that symbols mark various positions (or roles) and these roles come with various expectations. How roles and expectations develop depends on social structure. For example, it is common among many social structures that the role identity of manager is responsible for supervising other workers. Thus, there are certain expectations built into the role identity of manager due to this social structure—including assigning and directing the work of employees, tracking hours worked by others, or facilitating the resolution of any points of contention among employees. In any case, individuals who inhabit role identities, such as store manager, begin to internalize the expectations

associated with the role, and the role identity becomes part of their self-concept. When social structure is fairly stable, role expectations remain constant and continue to inform individuals about what types of behaviors are expected from that role identity (Stryker, 1980).

Another early source in the development of IT is the work of McCall and Simmons (1978) on interaction. McCall and Simmons (1978) theorized that people adopt role identities, which they described as an individual's proposed representation of him or herself in terms of a particular social position. These role identities are developed both through the consideration of the "role" aspect, or the expectations and information about the role identity that is prescribed by social structure and convention, as well as the "identity" aspect, or the individual variance built into each role identity based on how each individual represents his or her own interpretation of the role. McCall and Simmons argue that each person is able to have a multitude of role identities, which are organized into two different types of hierarchies. The salience hierarchy, which the authors also call the situational self, organizes identities into which identities are the most advantageous to be activated in any given situation. As this hierarchy is situationally based, it can be reorganized frequently and is fairly unstable. The other identity hierarchy is the prominence hierarchy, which is also referred to as the ideal self. This hierarchy organizes identities dependant upon the prominence of particular identities for an individual, the amount of support and reward they receive from activating certain identities, and the amount of perceived opportunity to activate identities. This hierarchy of role identities is likely to be much more stable than the situational self, and therefore unlikely to go through frequent changes. Also, identities that are higher in the hierarchy are more likely

to be activated across a variety of situations. After role identities have been adopted, these identities help guide social behavior and human interaction via role performances, meaning that individuals perform their roles in ways designed to reaffirm their identities (McCall & Simmons, 1978).

One of the primary goals IT discusses is this process of role performance in order to establish and reinforce role identities. This process is typically referred to as identity verification. Identity verification occurs when an individual enacts a role identity and his or her performance is observed by both him or herself, and any audience members, to be in line with how the individual thinks of him or herself (Burke & Stets, 2009). This verification process is modeled through what Burke and Stets have described as the Identity Control System, which is modeled after cybernetic models and Perceptual Control Theory (Powers, 1973). This system is a cyclical model composed of the following parts: the identity standard, input, the comparator, and output.

The identity standard is essentially the definition of a particular identity for an individual, meaning the standard consists of all the defining characteristics of an identity (Burke & Stets, 2009). The next step in the control system is the input, or the self- and other-perceptions that pertain to the activated identity. The identity standard is always the goal for how one hopes to be perceived, and this comparison between the standard and relevant input is performed by the comparator. Any error, that is any discrepancy between the identity standard and input of how the identity was perceived, is then corrected by relevant output, or behavior (Burke & Stets, 2009). For example, a man activates the role identity of a sensitive man, and his identity standard for sensitive is an eight on a ten-point scale, with one being not sensitive at all, and ten being extremely

sensitive. He will then engage in a role performance of sensitive, and then observe both his own and any audience members' perceptions of his performance. For this example, assume that he received feedback that his performance was rated at about a three on the sensitivity scale—perhaps he was brusque in dismissing the importance of the passing of a family pet to a friend. This feedback (or input) will be compared against his identity standard, and the result will be an error of negative five sensitivity points. Thus, the output may result in more attentive behavior than before to raise perceptions of his sensitivity so that it will be more in line with his identity standard.

Identity theorists propose that individuals are motivated by emotion to correct any errors between their identity standard and how their identity role performance is perceived, regardless of whether the perception was more negative or more positive than the identity standard. When there is a discrepancy, or in other words, when a person does not have his or her identity verified, then negative emotion, such as stress, is experienced. When an identity is verified, positive emotion is experienced (Burke & Stets, 2009; Stryker, 2004). This emotion is proposed to be stronger when an identity is either verified or not verified by a person who is important to the individual attempting identity verification, or if the individual has a high level of commitment to the identity (Burke, 1996; Stryker, 2004). Commitment to an identity has been defined by identity theorists as both the strength of one's identity as well as the number of relationships one has due to the identity (Stets & Burke, 2000). Additionally, if the interruptions in the identity verification process are numerous, then negative emotion is likely to be stronger (Burke, 1996). Not only does emotion play an important part in the motivation for achieving identity verification, but Stryker (2004) also argues that emotion helps structure society,

and therefore role identities. He states that people are more likely to gravitate towards social systems that share affective meanings with themselves, and that this shared positive affect is what increases commitment to those social systems or groups.

One other outcome of successful identity verification is positive self-esteem (Stets & Burke, 2005). Conversely, when identity verification fails, a decrease in self-esteem can occur. Thus, if one possesses an identity that is difficult to verify, it is likely that one's self-esteem will be lower. This situation is problematic for a few reasons, though primarily because self-esteem is protective against distress and depression (Mann, Hosman, Schaalma, & de Vries, 2004). As verification is important for self-esteem, Swann (1983) proposed that individuals create opportunity structures in order to increase the chances that they will have their identities verified. This structure takes the form of, 1) displaying signs and symbols that mark an individual as possessing a certain identity (for example, women with very short-hair and masculine clothing are probably more likely to be perceived as non-heterosexual), 2) selective affiliation, or choosing social groups or friends based on whether it is likely they will offer verification of one's identities, and 3) interpersonal prompts, which could be in the form of using gendered pronouns to describe one's romantic partner, for example (Swann, 1983). Through creating an opportunity structure, people can ensure their identities are verified more frequently, which can then increase positive affect and self-esteem. However, research indicates that for sexual minorities, individuals who are more public about their sexual orientation experience more incidents of heterosexism (Smith & Ingram, 2004).

Bisexuality. What can SIT, SCT, and IT tell us about bisexual identity and experience, and how can bisexual identity help inform these theories? The areas that I

will discuss in terms of these questions include social identity and visibility issues of the bisexual community, social identity and bisexual prejudice, issues of bisexual identity development, and health of bisexual individuals.

Social identity issues for bisexuality. There are potential difficulties that the bisexual community, and bisexual individuals, face(s) in forming a cohesive social identity. One of the most cited trials for the bisexual community, or for people who identify as bisexual, is the invisibility of bisexuality both in the mainstream heterosexual population and the minority gay and lesbian population. This invisibility is often referred to as bisexual erasure (Yoshino, 2000). As we tend to define an individual's sexual identity in terms of who one is currently sexually or romantically involved with, it becomes difficult to be visibly bisexual in this way (Breakhus, 1996; Ochs, 1996). It is not frequent practice for people to simultaneously and publicly have multiple partners of varying genders, so often times bisexual individuals are marked as heterosexual when they are with an other-sex partner, and homosexual when they are with a same-sex partner (Eliason, 1997). Deschamps (2008) has described this as a burden of proof for bisexual people. While individuals may not judge a heterosexual person as no longer straight if they have not had a romantic partner for several years, bisexual people may be judged as no longer bisexual if they are not currently participating in bisexual behavior (Deschamps, 2008).

Additionally, there are fewer instances of bisexual representation than there are for monosexual people. As stated previously, the bisexual population is rarely considered by itself, and is almost always put together with gay and lesbian populations in academic or health research. And again, even in the literature that addresses sexual minorities, only

16% of that literature includes bisexuality within the title (Rosenthal, 2012). Bisexual people also have very limited media representation in both mainstream and gay and lesbian media sources (Ochs, 1996). While there have been more instances of bisexual representation recently in television shows such as *House* or *Revenge*, there still exists a disparity between the number of bisexual characters portrayed and the rate of bisexuality in the American population.

As far as representation within sexual minority groups, there are few support or social groups that are for specifically bisexual people (Ochs, 1996). Some bisexual people may feel uncomfortable in joining groups that are for sexual minorities broadly, as they face some of the same prejudice from the lesbian and gay communities that they face from the heterosexual community (which will be discussed in more detail below). Without groups to join, it can often be difficult to find other people who identify as bisexual, and many bisexual people might not even realize they have met others who identify similarly (Ochs, 1996). As Swann (1983) stated, it increases an individual's chances of having his or her identity verified by creating an opportunity structure that includes selective affiliation and identity markers. If there is limited access to affiliate with other bisexual individuals, then this may decrease both the visibility of and verification of bisexual identity.

Additionally, one reason it may be difficult for bisexual people to be able to identify one another and develop affiliations is because there is not a clear way in which bisexuality can be physically marked. While sexuality is an invisible identity in contrast to race or gender, partnered heterosexual and homosexual people can at least visibly mark their identity by the gender of their partners. For bisexual people, this heuristic would

only lead to misidentification, unless they were partnered with multiple people of multiple genders. Deschamps (2008) indicates that one issue of visibility is that there is not an agreed upon “symbol” of bisexuality, and thus bisexual people cannot elect to be visually marked. While this invisibility gives bisexual people the option of remaining unidentified in situations in which they would prefer not to disclose their sexual identity, it also causes stress by leaving the task of identifying oneself up to each individual, and many bisexual individuals report feeling guilt when passing as heterosexual or homosexual (McLean, 2007; Ochs, 1996).

Beyond issues of visibility, the bisexual community may struggle with forming a cohesive social identity due to the huge amount of variance within the bisexual identity itself. Weinberg and colleagues noted that there does not appear to be a dominant profile for bisexual people (Weinberg, Williams, & Pryor, 1994). Similarly, Halperin (2009), in a brief response paper entitled “Thirteen Ways of Looking at a Bisexual,” noted that there are a multitude of ways one can be bisexual, including having romantic and sexual attraction to one gender, but only sexual attraction to another, or maintaining a long term committed relationship with a person of one gender, while engaging in fantasies about a different gender, or being simultaneously involved with people of the same and other gender. Klein (1993) also outlined various types of bisexuality, including historical bisexuality, which indicates a past of bisexual behavior but a present involvement in either a same sex or mixed sex relationship, or sequential bisexuality, which involves a continued mixture of same sex and other sex relationships, though not simultaneously, among others.

With this wide array of possibilities of behavior and attraction that can all be encapsulated under the identity of bisexuality, it is no wonder that Weinberg et al. (1994) were unable to determine a dominant bisexual identity. This lack of cohesiveness in social identity is referred to as low entitativity, or lacking of the qualitative that make groups “groupy” (Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007). As the uncertainty reduction hypothesis claims that one of the primary motivations for adopting a social identity is to reduce the amount of uncertainty in one’s life, individuals are more likely to have a stronger identification with groups that are high in entitativity, and thus have strong prototypes, than groups low in entitativity who possess weaker prototypes (Hogg, 2004). Potentially, if bisexuality is perceived as having low entitativity, this could explain why people who identify as bisexual continue to experience uncertainty about their identity. While visibility is most definitely a prominent issue for the bisexual community, it could also be that the difficulty with identifying strong prototypes, and thus prescribe behavior to increase similarity among various bisexual individuals, is also hindering the creation of a cohesive bisexual community.

Social identity and bi-prejudice. Another aspect of bisexual identity and experience that relates to SIT is bisexual prejudice. As one of the primary motivations stated for adopting a social identity is positive distinction, or evaluating one’s ingroup as better than relevant outgroups, social identification can be used to help buffer the effects of prejudice and stigmatization (Turner et al., 1987). This may still be true for devalued or stigmatized identities, as Hogg has stated, “people are exceedingly adept at buffering themselves from the self-evaluative consequences of stigma” (Hogg, 2006, pg. 120). Additionally, Crocker (1999) has argued that it is not stigmatization of a social group that

affects the self-worth of an individual in general, but rather feelings of self-worth as they relate to social groups may only be affected in immediate and situational contexts. However, it is possible that the level of social identity for bisexual individuals may influence how protective group membership can be. If a bisexual person activates a social identity of non-heterosexual, a LGBT group for example, he or she may have a very different experience in terms of protective effects than if a social identity of bisexual is activated. This is in part due to the unique nature of bi-prejudice in contrast to homophobia, or heterosexism directed at homosexual individuals. One aspect that separates bi-prejudice is that they may experience prejudice purported by the mainstream heterosexual community as well as the minority lesbian and gay community (Ochs, 1996; Weiss, 2004). This could potentially be explained by the black sheep effect discussed earlier (Marques et al., 2001).

In terms of the black sheep effect, in-group members that adhere more closely to the group norms are evaluated more favorably than in-group members that deviate from the norm (Marques, 1990; Marques et al., 2001). This is especially true when the norms that are violated by the deviant members are central to distinguishing the in-group from relevant out-groups. If one of the central characteristics that separate a sexual minority group from heterosexual people is being attracted to and engaging in sexual and/or romantic relationships with people of the same-sex and not the other-sex, bisexual group members deviate from that norm and may be punished for it. Likewise, if bisexual individuals are grouped with heterosexual people, the same central distinctive characteristic [i.e., having the capacity for romantic and/or sexual attraction for only one sex] is blurred between heterosexual and non-heterosexual people, potentially activating

the same unfavorable evaluation. For the black sheep effect, this type of in-group deviance can be pathologized, and deviant members or subgroups may be perceived as dysfunctional, or even demonized, by more normative group members (Marques, 1990).

The black sheep effect is also similar to the concept of horizontal hostility, or “prejudice shown by members of a minority group toward members of a similar minority group that is perceived to be more mainstream” (White & Langer, 1999). In the paper written by White and Langer (1999) an example they give of horizontal hostility is when members of the 44th Division of the APA resisted the inclusion of bisexual in the division title (previously entitled The Society for the Psychological Study of Lesbian and Gay Issues). As bisexual individuals may move in-between heterosexual and homosexual communities, they may be perceived to be mainstream by lesbian and gay communities. Both horizontal hostility and the black sheep effect demonstrate aspects of bi-prejudice.

Bi-prejudice was first defined as biphobia by Bennet (1992) as “the denigration of bisexuality as a valid life choice” (pg. 207). Some of the most common components of bi-prejudice are that bisexuality does not actually exist, and people who claim to be bisexual are either 1) confused about their sexual orientation, 2) are truly gay or lesbian and are just afraid to come out or want to hold on to some heterosexual privilege, or 3) will eventually transition to a gay or lesbian identity (Ochs, 1999; Rust, 2002; Yost & Thomas, 2012). Other components of bi-prejudice include believing that bisexual people spread disease, are incapable of monogamy, must be sexually attracted to men and women equally, make unreliable partners, and are less dedicated to the gay rights movement (Eliason, 1997; Mulick & Wright, 2002; Rust, 1993; Yost & Thomas, 2012). As indicated by the black sheep effect, bisexual people have been pathologized—

described as confused about their identity—and perceived as dysfunctional—the inability to conform to monogamous, long term relationships due to perennial need for both sexes—and demonized—spreaders of disease and saboteurs of the movement for equal rights between heterosexual and non-heterosexual people.

Coming out, identity, and bisexuality. In addition to differences in experience of prejudice, bisexual individuals may also have different experiences in identity development and coming out than indicated by the typical stage models used for gay and lesbian identity development, particularly in terms of identity onset, stability, commitment, and uncertainty. For bisexual individuals, research indicates that awareness of attraction to the other sex typically emerges before awareness to attraction to the same sex, which could potentially delay the emergence of a bisexual development process in comparison to the homosexual identity development process. In addition to a later identity assumption than traditional stage models would suggest for homosexual people, bisexual identification may also differ from homosexual and heterosexual identities in its long-term stability. As noted by Savin-Williams and colleagues, bisexuality appears to be the least stable identity in comparison to individuals who state they are exclusively heterosexual or exclusively homosexual (Savin-Williams, Joyner, & Reiger, 2012). For women who previously defined themselves as bisexual and later transitioned to a different identity, mostly heterosexual was the most common label to later be claimed. As IT would predict, if one continually does not have her or his identity verified, it may lead to abandonment of that identity (Burke & Stets, 1999). This is potentially one reason why bisexual identity is relatively unstable compared to heterosexual or homosexual identities.

Commitment, as measured by traditional sexual identity models and IT, may also not accurately reflect bisexual experience. Troiden (1988) theorizes that the mark of a healthy, final stage of identity development is commitment to that identity and the way of life prescribed by that identity. This includes the process of coming out to both heterosexual people and other sexual minorities. Similarly, IT states that higher commitment to an identity can be measured by the amount of relationships an individual has based upon her or his identity, which for bisexual identity implies that a bisexual individual came out to those relations (Stets & Burke, 2000). However, it has been noted that bisexual individuals are much less likely to come out to others (McLean, 2007; Weinberg et al., 1994). McLean (2007) found from her sample of bisexual individuals that it is much more likely for them to selectively choose situations to come out, though often they felt the need to hide part of their identity depending on the context of the situation. As many individuals misunderstand bisexual identity and what it entails, one of the major reasons cited for choosing not to come out was fear of being misidentified, or being assigned traits or behaviors that are not actually part of an individual's bisexual identity.

Identity Theory proponents have suggested that when an individual's identity is not verified, that is he or she is perceived differently from his or her identity standard, negative affect is often experienced (Stryker & Burke, 2000). Accordingly, if an individual has an identity that is difficult to have verified, such as the case with bisexuality, it is likely that individual will have lower self esteem (Swann, 1983). Thus, it may be that selectively coming out as opposed to fully committing oneself to the bisexual identity as Troiden's model suggests, may be an act of self-preservation (McLean, 2007).

Unfortunately, if identity formation models such as this continue to position coming out as healthy and good, and remaining “in the closet” as unhealthy and bad, it instills a false dichotomy of coming out. Those who do are perceived as honest, brave, and contributing to the community, whereas those who do not are painted as dishonest, scared, and selfish (McLean, 2007). As long as bisexuality remains to be largely misunderstood (and therefore potentially more difficult to have verified), and bisexual individuals lack community to combat the negative effects of bi prejudice, this rhetoric of coming out has the potential to be harmful to the majority of bisexuals.

The last point that the discussed sexual identity formation models and SIT do not address for bisexual individuals is the continued uncertainty (Weinberg et al., 1994) or the identity management stage (King, 2011). While Troiden (1988) theorizes that the final stop in identity development is acceptance and synthesis of one’s identity into everyday life, it appears that many bisexual individuals face continued worries of legitimacy and questioning of their identity. This uncertainty is also contradictory to the uncertainty reduction hypothesis promoted by SIT theorists. As we often define people’s sexual identity in terms of who they are currently romantically or sexually involved with, bisexual individuals continually have their identity erased by those around them (Brekhus, 1996). It is extraordinarily difficult to maintain the parameters of a bisexual identity when everyone sees you as either heterosexual or homosexual depending upon the gender of your partner. Potentially, consequences of this lack of identity verification are reflected in the instability of the bisexual identity, i.e. people who previously identified as bisexual may begin to define their identity in terms of who their current partners are. Additionally, those who express bi prejudiced attitudes and question the

existence of bisexuality may further influence individuals to question the legitimacy of their identity. King (2011) suggests that the way to maintain a bisexual identity is to accept the fact that it may be a dynamic identity forever, and that one must expect at least perceived changes in identity, if not actual changes depending upon context.

Bisexuality and health. One of the oft-cited associations with non-heterosexual identities is negative health effects (Savin-Williams, 2005). Many studies conducted on data collected from national samples has found higher prevalence rates of Generalized Anxiety Disorder (GAD) among lesbians and gay men compared to heterosexual men and women (Cochran & Mays, 2009; Cochran, Sullivan, & Mays, 2003; Gilman, Cochran, Mays, Hughes, Ostrow, & Kessler, 2001). Additionally, Bostwick and colleagues found higher rates of GAD for bisexual women than lesbian women, though bisexual men reported lower rates of GAD than gay men (Bostwick, Boyd, Hughes, & McCabe, 2010). Other researchers have found that bisexual women have a higher likelihood of reporting lower overall physical health than heterosexual women, where lesbians do not (Cochran & Mayes, 2009). Bisexual women have also been found to be more likely than lesbians to experience mental distress and poor general health, especially in urban areas (Fredriksen-Goldsen, Kim, Barkan, Balsam, & Mincer, 2010).

There have been a few explanations offered as to why sexual minorities report higher prevalence rates of negative health, such as experience of prejudice or minority stress (Fredrikson-Goldsen et al., 2010). As to why bisexual women seem to be more at risk for negative health consequences than other sexual minorities, Fredriksen-Goldsen and colleagues suggest that it may stem from experiencing a lack of support from both heterosexual and lesbian communities, and a lack of access to a defined bisexual

community (Fredriksen-Goldsen et al., 2010). In relation to IT and identity verification, some of the consequences of a frequently disrupted identity verification process is negative affect and mental distress, it is possible that the lack of identity verification for bisexual individuals could contribute to the lower health ratings compared to heterosexual people, and in the case of bisexual women, compared to lesbian women as well.

It is important to note that while there seem to be higher rates of GAD, and mental distress, and lower overall physical health for bisexual people and other sexual minorities, it is still the minority of these populations that report experiencing these negative health incidents. The majority of bisexual people do not suffer from serious mental and physical health issues. Their problems are similar to the heterosexual or homosexual population. Thus, while it is important to address health inequalities between these populations and work towards understanding the causes of these inequalities in order to alleviate the negative health effects, it is equally important to understand the resilience of of bisexual people, and understand that many of bisexual individuals are thriving. By doing so, we may be able to learn how to better serve bisexual individuals who are struggling with health issues.

The Present Research

Generally, I am interested in identity uncertainty, and the possible effects of that uncertainty, on bisexual-identified individuals. Study One was developed to investigate whether the manipulation of individuals' self-perceived bisexual prototypicality affects feelings of identity uncertainty, self-esteem, positive and negative affect, and stress. I hypothesize the following:

Hypothesis 1: Perceived prototypicality will be negatively associated with identity uncertainty. Specifically, individuals who believe they are more prototypical will harbor less identity uncertainty than individuals who believe they are less prototypical.

Hypothesis 2: Identity uncertainty will be negatively associated with self-esteem and positive affect. Specifically, individuals who harbor greater levels of identity uncertainty will have lower self-esteem and less positive affect than individuals with less identity uncertainty.

Hypothesis 3: Identity uncertainty will be positively associated with negative affect and stress. Specifically, individuals who harbor greater levels of identity uncertainty will have higher levels of negative affect and stress than will individuals with less identity uncertainty.

Study Two was designed to investigate whether a) bisexual people experience frequent identity non-verification in terms of their sexual identity, and if so, b) if there is a relationship between identity verification and identity uncertainty, and whether identity uncertainty is associated with abandoning the label of bisexual, and c) whether there are long-term health and wellness consequences due to these experiences. I hypothesize the following:

Hypothesis 4: If bisexual individuals experience frequent identity non-verification, it may lead to greater levels of identity uncertainty. Conversely, if bisexual individuals experience frequent bisexual verification, it may lead to lower identity uncertainty.

Hypothesis 5: Identity verification will be positively associated with self-esteem and positive affect. Specifically, if individuals experience identity verification, it may lead to higher levels of self-esteem and positive affect.

Hypothesis 6: Identity verification will be negatively associated with negative affect, stress, and negative health behavior. That is, identity verification may lead to lower levels of negative affect, stress, and negative health behaviors.

Method

Study One

Design. Study one utilized a between-subjects experimental design. Participants were randomly assigned to either the “high prototypicality” group or the “low prototypicality” group, where they received false feedback that indicated either high prototypicality or low prototypicality. The outcome variables to be measured included stress, positive and negative affect, state self-esteem, social belonging, and identity certainty and centrality.

Sample. The sample consisted of 42 individuals (33 females, eight males, and one non-binary gender person) who identified as bisexual. Participants were recruited from University of Hawai'i at Manoa (UHM). The age of participants ranged from 18-30, and the average age was 21.1 years. A little over half (52.2%) of the participants were biracial or multiracial, 28.6% were white, 4.8% were Filipino, and the remaining 14.4% were from a variety of backgrounds, including Chinese, Japanese, Korean, Samoan, and Indian. Of the participants who reported religious identification, 38% identified as either agnostic or atheist, 33.3% identified as spiritual, and 16.7% identified as religious. All of the participants identified as bisexual.

Measures. The measures included in this study were an identity certainty and centrality measure, the Current Thoughts Scale (Heatherton & Polivy, 1991), the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988), and a social belonging measure adapted from Bollen and Hoyle's (1990) perceived cohesion scale. Additionally, a galvanic skin response sensor was used as a physiological measure of stress. Each of

these measures will be considered separately. In addition, participants filled out a demographic form. All measures can be found in Appendix A.

Identity certainty and centrality. A bisexual identity certainty and centrality measure—with the centrality items adapted from the Multidimensional Inventory of Black Identity (Sellers, Rowley, Chavous, Shelton, & Smith, 1997)—was created to measure both how fundamental identifying as bisexual was to participants' sense of self, as well as how sure they felt in adopting the label of bisexuality to describe their sexual identity. An example of a centrality item includes, "In general, being bisexual is an important part of my self-image," and an example of a certainty item is, "I feel like an imposter when I claim a bisexual identity." A factor analysis and scale reliability analysis were performed on this scale, and it was revealed that it should be separated as two scales in the future. Detailed description of these analyses and results can be found in the results and discussion section. The Cronbach's α for each of the two factors in the centrality scale were .841 and .791, respectively. The Cronbach's α for each of the three factors in the certainty scale were .798, .820, and .869.

The current thoughts scale. The Current Thoughts Scale was developed as a way to measure state-based self-esteem (Heatherton & Polivy, 1991). While self-esteem is often thought of as a trait element and therefore as something that would not be immediately affected by a laboratory manipulation, Heatherton and Polivy's scale ask participants to answer questions for how they feel in the moment, such as, "I feel self-conscious." Specifically, this scale was developed to accurately measure changes in self-esteem caused by experimental manipulations. It has been found to be a reliable measure of state self-esteem (Heatherton & Polivy, 1991).

The positive and negative affect scale. The Positive and Negative Affect Scale was developed to measure positive and negative affect with a variety of time instructions, including in the moment, daily, a few days, a week, a month, a year, or just generally (Watson, Clark, & Tellegen, 1988). In the current study, participants were asked to fill out the scale for their in the moment feelings. The Cronbach's α for in the moment time instructions is .89 for the positive scale, and .85 for the negative scale. The scale itself asks participants to rate on a one to five scale how strongly they are feeling a particular emotion, such as "distressed" or "inspired."

Social belonging. A social belonging measure adapted from Bollen and Hoyle's (1990) perceived cohesion scale was developed to measure how strongly participants felt they belonged to the bisexual community. As with the identity certainty and centrality measures, a factor analysis and scale reliability analysis were performed on the scale, the results of which are detailed later. The scale had a Cronbach's α of .911, and included items like, "I feel that I belong to the bisexual community."

Galvanic skin response. Galvanic skin response (GSR) was used as a physiological indicator of stress. GSR has long been used as a physiological measure of stress in psychological research (Gulian, 1971; Nomikos, Opton, & Averill, 1968; Richard, 1971), and has been found by past research to be more reliable than other non-invasive physiological measures, such as heart rate (Milovanova & Sviridov, 1994). In this case, participants had two electrodes attached to their index and middle finger on their non-dominant hand, and a measure was taken both at baseline and after the manipulation. The gauge attached to the electrodes ranges from negative two to positive two, where an increase in score indicates an increase in arousal. The baseline measure

was taken by waiting for the indicator needle to settle at a defined point, and the post measure was taken by seeing where the indicator needle was pointing on the gauge immediately after the manipulation feedback.

Procedure. Participants met individually with a researcher in the Hatfield laboratory. Upon arrival, participants were given an informed consent form (in Appendix D). If the participant consented to further participation, the experiment began. The experimenter, who had been trained to follow a script, introduced the study as a continuation of previous research that investigated personality traits in bisexual people that had already been conducted with many bisexual participants. The script for Study One can be found in Appendix B. After introducing the study, the researcher took a baseline GSR measure and then instructed the participant to fill out the false personality inventory. The personality inventory was completely fabricated and is not considered a reliable or valid measure of personality or bisexuality. Questions on the inventory were modeled after the style of questions on the Minnesota Multiphasic Personality Inventory.

After the measure was completed, the research assistant “graded” the participant’s responses. In the high prototypicality condition, participants received false feedback that indicated they were a very strong representation of a bisexual personality. In the low prototypicality condition, participants received false feedback indicating they were a weak representation of a bisexual identity. Specifically, participants were told that 95% (high prototypicality) or 40% (low prototypicality) of their personality responses matched that of a previous bisexual sample. Additionally, they were shown a scatterplot that either depicted them right among all other “participants,” or as an outlier. These two scatterplots can be found in Figure 1. Immediately after receiving the false feedback, a

GSR reading was taken as a measure of stress. The participant then completed the rest of the outcome measures, which were counterbalanced. After the participants completed the outcome measures, they were given a demographic form to complete.

When the participants completed all measures, the researcher conducted a check of the manipulation and an assessment as to whether subjects had believed the deception. The manipulation check included two items: how prototypical the information claimed they were on a one to five scale, based on the experimental feedback, plus whether they agreed with the rating. The manipulation check results are reported below.

The deception check involved the research assistant asking the participant a series of questions such as, what was the experiment about? Was there anything that stuck out to you as odd about the experiment? A description of the deception check is detailed with the prototypicality manipulation results. Both check forms are included in Appendix C. After the manipulation and deception check, the participants were fully debriefed by the researcher. The debriefing form can be found in Appendix E.

Study Two

Design. Study two was in the form of a 30-day longitudinal daily diary study. Participants completed the same measures as Study One on the first and thirtieth day of

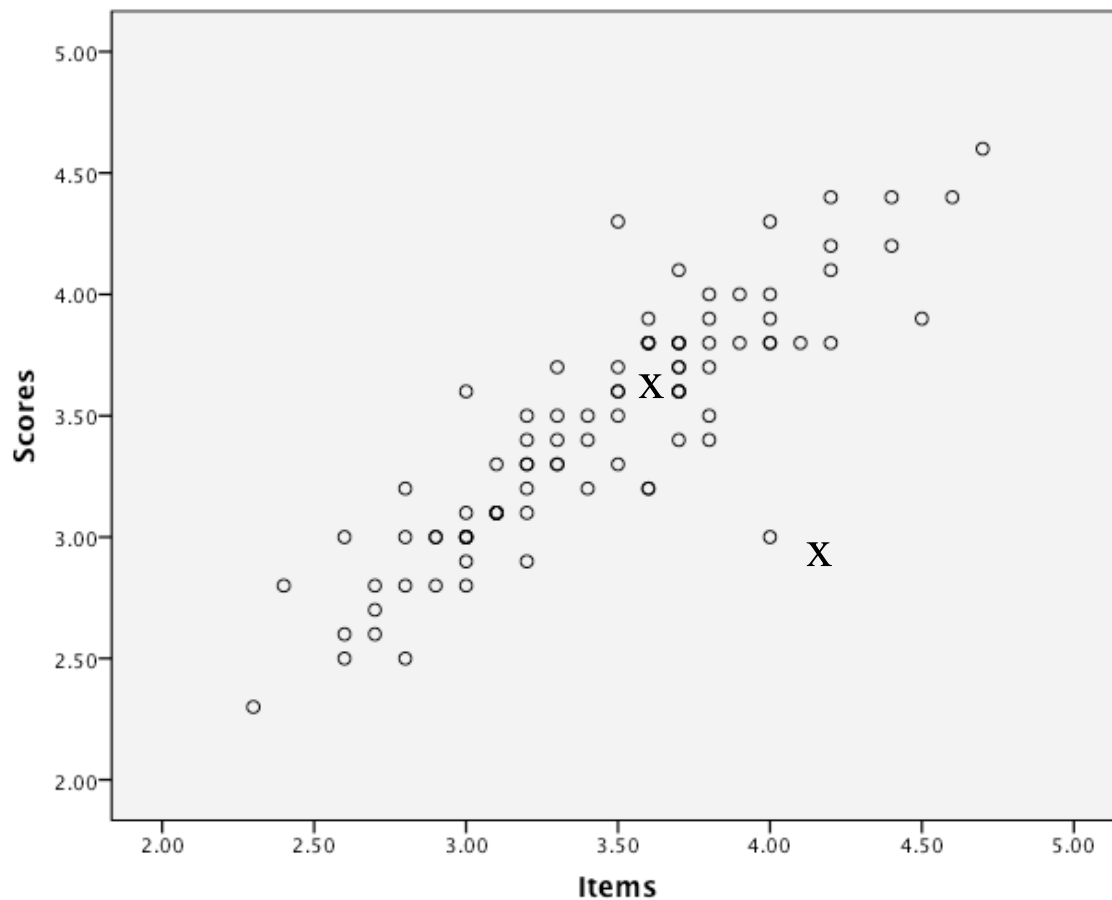


Figure 1. Visual manipulation feedback depicting the high prototypic and low prototypic feedback.

the month, as well as a demographic form. The first and last day measures included assessment of affect, self-esteem, social belonging, and identity certainty and centrality. Participants also completed daily diary entries for days 2-28. The diary entries included outcome measures to record identity verifying or nonverifying experiences, microaggression experiences, anxiety, stress, and health behavior (such as days of work or school missed).

Sample. The sample for this study included 91 participants (30 men, 49 women, and 7 genderqueer individuals) who filled out at least one daily diary measure, though 70

participants filled out the first and last day measures. This indicates an attrition rate of about 23%. Participants were recruited through posting fliers around the UHM campus and various public locations, notices through listserves and campus groups, and the bisexual community on Reddit. The majority of participants were white (74.3%), 17.1% of participants were biracial or multiracial, 3.4% were Latino. The remaining 5.2% of participants were from a variety of backgrounds, including African-American, Korean, and American Indian. The most common religious identity was atheist (45.7%), while 15.7% identified as agnostic, 15.7% identified as spiritual, 9.1% identified as religious, 3.3% identified with Earth-based religions like Paganism and Wicca, and the remaining 10.5% of participants identified with a wide range of beliefs including Taoism, Buddhism, and others. The majority of participants simply identified as bisexual (72.7%), though many participants identified as pansexual or omnisexual (20.5%), and the remaining participants identified as queer or variations of bisexual (such as “Queer/bisexual for convenience”). While not included in formal demographic assessments, participants reported that they lived in various geographic locations, including the US, the UK, Canada, Australia, Spain, and the Netherlands. A small number of participants from Study One also participated in Study Two—approximately three participants overall.

Measures. The following outcome measures were used for the first day of the study: a bisexual identity certainty and centrality measure, the Current Thoughts Scale (Heatherton & Polivy, 1991), the Positive and Negative Affect Scale (Watson, Clark, & Tellegen, 1988), a social belonging measure adapted from Bollen and Hoyle’s (1990) perceived cohesion scale, a questionnaire where participants responded to open ended

questions about the definition of bisexuality, and a demographic measure. The last day, participants filled out all measures again, except for the thoughts on the definition of bisexuality and the demographic form. See measure descriptions under Study One for complete information of each of these measures.

Daily diary measures. For the daily diary responses, participants reported whether they experienced positive or negative identity events and wrote a short narrative describing events, a microaggression questionnaire (some items adapted from suggestions by Nadal (2008)), and a health behaviors questionnaire. Participants also responded on a five-point likert scale their stress and anxiety for each diary entry. All measures can be found in Appendix F.

There were three narrative identity event questions, which were all formatted similarly. For example, one question asked, “In the last 24 hours, I had an experience that I felt invalidated my bisexual identity,” to which participants responded yes or no. Then participants were asked to describe the experience if they replied “yes.” Immediately after the narrative responses, participants checked whether they had experienced any microaggressions in the past 24 hours. Two sample items from the microaggression questionnaire include: “You heard someone use a sexual minority slur,” and “You were told bisexuality is just a phase.” Next, participants checked whether they had engaged in any positive or negative health behaviors in the past day, including “I stayed in bed due to illness,” and “I engaged in 20 minutes of exercise or more.” Finally, participants reported how much stress and anxiety they had experienced in the past day, each ranging from one (not stressed/anxious at all) to five (extremely stressed/anxious).

Procedure. After IRB approval was obtained, participants were given a link that led to the measures on Google forms. While participants could access fresh forms from this link every day, all information was password protected and no participant could view responses after submission. Participants were assigned an ID number after expressing interest in the study, and all links between any identifying information and ID numbers was destroyed after the number had been assigned. Upon the initial access of the daily diary, participants were given an informed consent form (Appendix G). If they consented to participate, they were asked to commit to the 30-day study.

After beginning the study, participants received a daily email notification reminding them to fill out the daily diary form for that day. Participants were instructed that if they were unable to complete the daily diary for a particular day, they should simply skip that day. On the final day, participants completed the exit measure, which included the measures outlined above. Additionally, all participants received a \$15 Amazon.com gift card on the 30th day, funds for which were provided by a dissertation award from the Research Corporation of the University of Hawaii as well as the Bisexual Foundation Scholarship Award distributed by the APA Division 44. Participants who indicated they were interested in the results of the study received an executive summary of the results.

Results

Measure Factor Analysis and Reliability

As two scales were created or modified to be appropriate to use with a bisexual population for both studies, a factor analysis and assessment of reliability was performed for both the Identity Certainty and Centrality measure as well as the Social Belonging measure. The sample used to perform these analyses were the Day One responses from the longitudinal study. The results from the experimental study were not used as participants completed those measures after the experimental manipulation. The total sample size for these analyses was 86 participants. While this is lower than what is typically considered ideal for a factor analysis, the sample size adequacy test indicated the sample size was acceptable in each case. The factor analysis and reliability assessment is discussed for each scale separately.

Identity certainty and centrality scale. This scale was initially created as two subscales: one subscale for identity centrality that was modified from the Multidimensional Inventory of Black Identity (Sellers, Rowley, Chavous, Shelton, & Smith, 1997), and a second subscale created to measure identity certainty. Based on the results from the correlation matrix during preliminary analysis, the scale was broken down into two separate scales as opposed to two subscales. The correlation coefficients between the centrality and certainty items were largely below $r=.3$, which is typically thought of as too low to be measuring the same phenomena. Subscales should be measuring phenomena related enough that they should correlate with one another fairly well (Field, 2009).

Identity centrality scale. A principle component analysis (PCA) was conducted on the eight items of the identity centrality scale with orthogonal rotation (quartimax). The Kaiser-Meyer-Olkin (KMO) measure was .847, indicating a great sampling size adequacy (Field, 2009). Additionally, all KMO values for the individual items were .755 or higher, which is also above the minimum .5 criteria score. Bartlett's test of sphericity was significant, $X^2(28)=256.36, p<.001$, indicating that correlations between items were high enough to perform PCA. The Kaiser's criterion was used to determine factor extraction, where any component with an eigenvalue above 1 was extracted. This resulted in the extraction of two factors, which was also supported by the scree plot and explained 64.8% of the overall variance. Table 1 displays the factor loadings after rotation for each component, indicating two clusters: individual identity aspects and relational identity aspects.

After the factor analysis, a reliability analysis was performed on the two components as two subscales. Each subscale had strong reliability, as seen in Table 1. Cronbach's α did not change substantially if items were removed from the individual identity aspect subscale, supporting the notion that all items should remain. As the relational identity subscale only had two items, Cronbach's α scores if item deleted were not available.

Identity certainty scale. As with the certainty scale, a principle component analysis (PCA) was conducted on the ten items of the identity certainty scale with orthogonal rotation (quartimax). The KMO measure was .665, indicating the sample size was adequate for PCA (Field, 2009). Additionally, all KMO values for the individual items were .5 or higher, meeting the minimum .5 criteria score. Bartlett's test of

sphericity was significant, $X^2(45)=340.94, p<.001$, indicating that correlations between items was high enough to perform PCA. The Kaiser's criterion was used to determine factor extraction, where any component with an eigenvalue above 1 was extracted. This resulted in the extraction of three components, which was again supported by the scree plot and explained 66.5% of the variance altogether. Table 2 displays the factor loadings for each component after rotation, which describes three clusters: subjective certainty, experiential dependent certainty, and experiential independent certainty.

Table 1
Identity Centrality Scale Factor Loadings

Factors	Items	Loadings
Individual Identity	Overall, being bisexual has very little to do with how I feel about myself (R)	.825
	In general, being bisexual is an important part of my self-image	.793
	My destiny is tied to the destiny of other bisexual people	.598
	Being bisexual is unimportant to my sense of what kind of person I am (R)	.819
	Being bisexual is an important reflection of who I am	.670
	Being bisexual is not a major factor in my social Relationships (R)	.714
Relational Identity	I have a strong sense of belonging to bisexual people	.795
	I have a strong attachment to other bisexual people	.831
		Cronbach's $\alpha = .841^1; .791^2$

Note: The ¹ indicates the Cronbach's α for the first factor, and the ² indicates the score for the second factor. (R) indicates reverse scored.

As with the centrality scale, a reliability analysis was performed after the factor analysis for the three components. All subscales had strong reliability, as shown by the Cronbach's α in Table 2. Additionally, the experiential dependent certainty subscale (consisting of five items) did not show significant changes in the Cronbach's α when individual items were deleted, suggesting all items should be retained.

Social belonging scale. The preliminary analysis of the social belonging scale (modified from Bollen and Hoyle's (1990) perceived cohesion scale) showed that all items were strongly correlated with one another, suggesting that all items are measuring a similar phenomenon. As with the previous two scales, a PCA was performed on the six items with orthogonal rotation (quartimax). The KMO score for the scale was .861, suggesting the sample size was adequate to

Table 2
Identity Certainty Scale Factor Loadings

Factor	Items	Loadings
Subjective Certainty	I feel certain about my sexual identity	.850
	I feel secure in my sexual identity	.799
Experiential Dependent Certainty	I feel like an imposter when I claim a bisexual identity (R)	.576
	I feel like I have not had enough other-sex sexual experiences to be fully comfortable with claiming a bisexual identity (R)	.796
	I feel like I have not had enough same-sex sexual experiences to be fully comfortable with claiming a bisexual identity (R)	.780
	I feel like I have not had enough other-sex romantic experiences to be fully comfortable with claiming a bisexual identity (R)	.830
Experiential Independent Certainty	I feel like I have not had enough same-sex romantic experiences to be fully comfortable with claiming a bisexual identity (R)	.755
	My level of comfort with my bisexual identity is not dependent upon my past or present sexual behavior	.932
	My level of comfort with my bisexual identity is not dependent upon my past or present romantic relationships	.911
Cronbach's $\alpha = .798^1; .820^2; .869^3$		

Note: The ¹ indicates the Cronbach's α for the first factor, ² indicates the score for the second factor, and ³ indicates the score for the third factor. (R) indicates reverse scored.

perform a PCA. Further, the Bartlett's test of sphericity was significant, $X^2(15)=392.53$, $p<.001$, demonstrating the inter-item correlations were strong enough to perform PCA.

The Kaiser's criterion was used again to determine extraction, which resulted in one component. The scree plot supported this extraction, and the component accounted for 69.85% of the variance. Thus, it appears the social belonging scale does not need to be broken down into subscales.

A reliability analysis was then performed, and the overall Cronbach's α was .911, indicating strong reliability. The Cronbach's α score did not change substantially when individual items were deleted from the measure, indicating all items should be retained.

Study One

Manipulation and deception check. The participants in the high prototypic condition reported an average prototypicality rating of 4.1, and those in the low prototypic condition reported an average of 2.1, indicating there was a significant difference in level of self-perceived prototypicality ($F(1,40)=71.53, p<.001$). Almost all participants stated they agreed with the prototypicality rating. As for whether participants believed the deception, none of the participants were able to identify the true purpose of the experiment in the questioning after the completion of the experiment. Many participants reported they thought we were investigating personality traits among bisexual individuals, or we were interested in self-esteem and identity for people who identify as bisexual. Based on these outcomes, I am certain the manipulation and deception were effective.

Hypothesis tests. The overall MANOVA was not significant for Study One ($F=1.39, p=.252$). Thus, there was not a significant main effect for which condition (i.e. high prototypicality or low prototypicality) the participants were in on self-esteem, affect, identity certainty and centrality, or social belonging. Further, Hypothesis One—individuals who believe they are more prototypical will harbor less identity uncertainty than individuals who believe they are less prototypical—was not supported. In fact, the results were marginally significant in the opposite direction—individuals who were in the low prototypicality condition had higher levels of identity certainty and centrality

($M=3.30$, $SE=.092$) than individuals in the high prototypicality condition ($M=3.06$, $SE=.092$), $F(1, 41)=3.40$, $p=.073$.

Hypothesis Two, individuals who harbor greater levels of identity uncertainty will have lower self-esteem and less positive affect than individuals with less identity uncertainty, was also not supported. There were small, non-significant correlations between identity certainty and self-esteem ($r=.189$, $p=.232$) and positive affect ($r=.105$, $p=.509$). Further, while not statistically significant, the data concerning comparisons between prototypicality conditions are again trending in the opposite direction as hypothesized based on prototypicality condition. The average rating of positive affect for the low prototypicality group ($M=33.10$, $SE=1.71$) was marginally higher than the average positive affect rating for the high prototypicality group ($M=30.19$, $SE=1.71$), $F(1, 41)=1.45$, $p=.236$. As for self-esteem, the low prototypicality group reported marginally higher self-esteem on average ($M=72.19$, $SE=3.26$) than the high prototypicality group ($M=64.29$, $SE=3.26$), $F(1, 41)= 2.93$, $p=.095$.

Finally, Hypothesis Three, individuals who harbor greater levels of identity uncertainty will have higher levels of negative affect and stress than will individuals with less identity uncertainty, was not supported. There were low, non-significant negative correlations between identity certainty and negative affect ($r = -.150$, $p = .342$) and the increase in stress ($r = -.171$, $p = .279$). Once again, the data are trending in the opposite direction as predicted based on prototypicality condition. Participants in the low prototypicality condition had marginally lower levels of negative affect ($M=17.52$, $SE=1.86$) than participants in the high prototypicality condition ($M=22.76$, $SE=1.86$),

$F(1, 41)=3.96, p=.053$. All data for the dependent variables comparing the high and low prototypicality participants can be found in Figure 2.

As for stress measured by the GSR, there was a significant difference in participants' GSR ratings between their baseline measures taken at the start of the study, and their post measures taken after being given the feedback about their prototypicality, $F(1, 41)=7.43, p=.01$. There was not a significant interaction between GSR ratings and prototypicality condition, $F(1, 41)=2.12, p=.153$. Thus, being told one is highly prototypical or not did not seem to have an effect on levels of stress, but receiving feedback in general appeared to increase arousal.

A mediational analysis was performed to see whether identity certainty and centrality significantly mediated the relationship between prototypicality and the other dependent measures of self-esteem, social belonging, and affect. However, the first two regression analyses (between condition and identity scores, and then between identity scores and the remaining dependent variables) were not significant. It does not appear that identity certainty and centrality significantly mediate the relationship between prototypicality and the rest of the dependent measures for these participants.

Study Two

Descriptive information. The total number of negative identity events reported by the participants (which is the combination of identity threat and negative identity affirming events) was 105. Twenty-eight of the participants did not report any negative identity events over the course of the month, 22 participants reported one to two negative

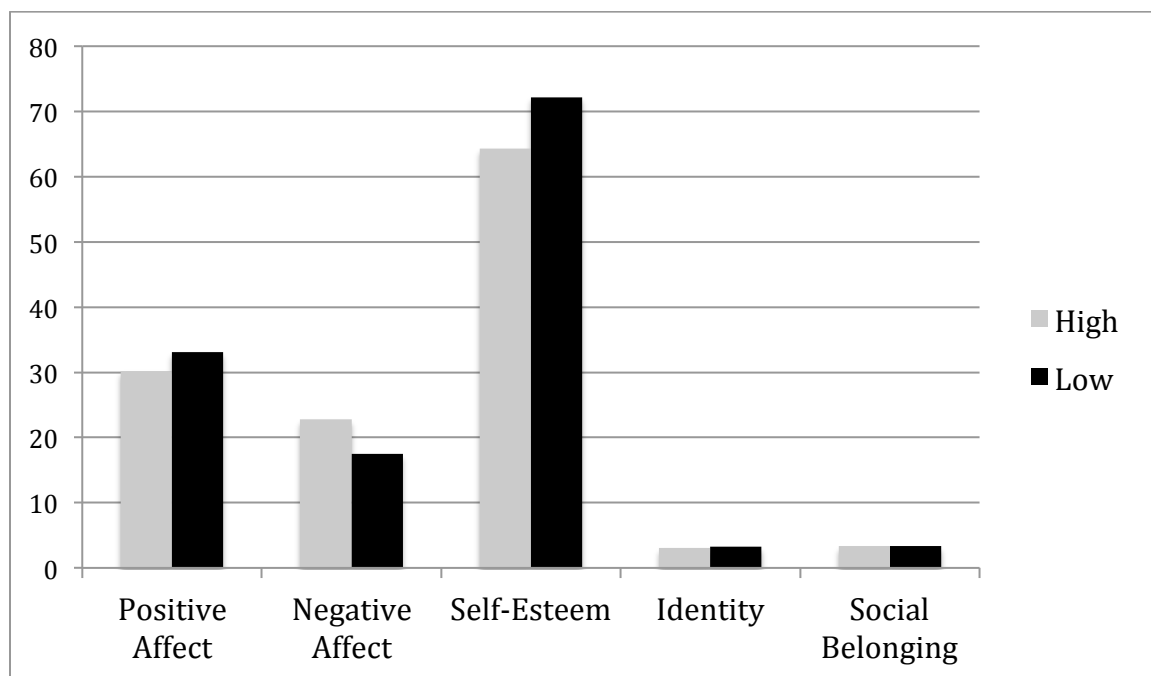


Figure 2. *Average Participant Responses for High and Low Prototypicality Groups*

events, and 19 participants reported three or more negative identity events (with the maximum reported being nine). For positive identity events, there was a total of 278 experiences reported. Twelve participants did not report any during the study, 18 reported one to two positive events, 30 participants reported three to ten positive events, and six participants reported more than ten positive events, with 18 being the highest.

Participants were also asked overall how they felt about their identity on a one to five scale, where one represented very negatively and five represented very positively. The average rating for participants was 4.49, indicating overall high levels of positive feelings about sexual identity.

Bisexuality definitions. Participants responded to five open-ended questions where they gave both personal and general definitions of bisexuality. They also completed a checklist, which asked them to check off any description that they would identify as a definition of bisexuality. Overall, the most frequently cited component of

bisexuality was attraction, rather than actual romantic or sexual experienced. The frequencies for each endorsement of the checklist items can be found in Table 3.

Microaggression experiences. All of the microaggression experience items were reported as having been experienced by at least one participant over the course of the study. The five most commonly reported microaggressions were “You heard someone use the term ‘gay’ to mean bad or stupid” with 424 total reports, “Someone assumed or stated you were heterosexual” with 343 reports, “You heard someone use a sexual minority slur,” with 321 reports, “You felt compelled to identify yourself as bisexual to someone else,” with 238 reports, and “You heard someone omit bisexuality when they were speaking about sexual minorities in general,” with 148 reports. All accounts of microaggression can be found in Table 4.

Positive and negative identity experiences. When participants reported they experienced a positive affirming identity experience, negative affirming identity experience, or an identity threat (i.e. non-verification) experience, they wrote a short narrative describing what that experience entailed. These experiences could be actual interactions one had with other people, entirely internal experiences, or passive experiences with one’s environment. These qualitative responses were thematically analyzed with the use of Nvivo, and were organized into various categories. Below are descriptions of each of these categories with illustrative quotes from participants. As no identifying information was linked to participant responses, the quote illustrations cannot be attributed to a particular person. All participant responses have been presented as they were written by the participants, including any errors in typing.

Negative affirming experiences. Negative affirming experiences were those where participants felt as though their bisexual identity was validated or recognized, but their identity was not perceived or treated in a positive manner. The general themes of the data include: concern with the reactions of others, inappropriate eroticization, dismissing or erasing bisexuality, and bi-negative stereotypes.

Table 3
Definitions of bisexuality

Checklist Items	Frequency (<i>n</i>)
Romantically interested in at least two genders	58
Sexually interested in at least two genders	59
Has had relationships with at least two genders	27
Has had sex with at least two genders	22
Has the capacity for romantic interest with at least two genders	59
Has the capacity for sexual interest with at least two genders	61
Is sexually interested in only one gender	0
Is romantically interested in only one gender	0
Has had relationships with only one gender	0
Has had sex with only one gender	0
Has the capacity for romantic interest with only one gender	0
Has the capacity for sexual interest with only one gender	0

Concern with the reactions of others. This response theme included a variety of concerns, such as whether others were made uncomfortable by their attraction, whether they would be inappropriately sexualized or judged, and worries about the reaction of lesbian women and gay men. For example, one participant reported

I was out with friends who attract a very specific type of guy, and when I made a comment about being attracted to a female he made it into an issue and essentially made me feel as if my interest in women was purely for his own sexual enjoyment. The girls I was with too, though they didn't make any comments, made me feel as though I shouldn't mention anything about my attraction to/relationships with women for fear of silent judgement.

Table 4
Total Microaggression Experience Frequencies

Microaggression Experiences	Number of
You were asked if you chose to be bisexual, or why you chose to be bisexual	37
You heard someone use the term “gay” to mean bad or stupid	424
You heard someone use a sexual minority slur	321
Someone used a sexual minority slur against you	61
Someone stated or implied that you should “act straight.”	51
Someone assumed or stated that you are heterosexual	343
Someone assumed or stated that you are homosexual	104
You were told bisexuality is just a phase	60
Someone implied or stated that bisexuality is not a real sexual identity	93
Someone remarked that they did not understand how someone could be bisexual	66
Someone implied that you probably wouldn’t identify as bisexual later	53
Someone assumed you must have come out to everyone	40
Someone assumed you came out as an older teenager or young adult	12
Someone assumed you must be like another person they know because both of you are bisexual	23
You were asked whether or not you have HIV/AIDS	11
You were asked whether you have had many sexual partners	42
You were asked how many men/women you have had sex with	62
You were asked how many relationships you have been in with men/women	49
You were asked how long it has been since you’ve had sex with a man/woman	46
You were asked how long it has been since you’ve been in a relationship with a man/woman	45
You heard someone omit bisexuality when they were speaking about sexual minorities in general	148
You felt compelled to identify yourself as bisexual to someone else	238

Another participant reported concern about how other non-bisexual sexual minorities would react to their bisexual identity.

I want to meet girls, but most girls at GSRM hangouts seem to be purely lesbian and I’m afraid to be fully honest lest I face backlash. Also, I don’t have a very

close friend group of queer friends, so at this GSRM hangout I went to all I could keep thinking of was all the bad things I've heard LG people say about bi people, and I felt frozen.

Inappropriate eroticization. Participants also reported having negative identity experiences where they felt as though they and/or their bisexual identity was sexually objectified or fetishized.

had to explain that just because I'm bi, I do not kiss girls for male's amusement
And

Found the "bisexy" subreddit which is mostly screencaps from porn threesomes posted by someone who titles them as if they were one of the people in the photo. I felt my sexuality was fetishized.

Dismissing or erasing bisexuality. Another commonly reported negative identity experience was encounters where participants felt their identity, or bisexuality in general was dismissed. For example, one participant reported feeling negatively after reading about how a bisexual identity cannot exist in the context of a long-term relationship with one person:

the posts were about how bi people in long term relationships are seen as giving up bisexuality in favor of a single partner [...] it still made me feel insecure

A separate participant reported the dismissal of another bisexual person's identity:

A person I know came out as bisexual recently and yet people keep saying he's gay, even though he has a girlfriend and they know he's bi they never use that word

Bi-negative stereotypes. One of the most commonly reported negative identity experiences dealt with bi-negative stereotypes, such as bisexual people are promiscuous and incapable of monogamy, general stigma toward bisexuality, and fear of perpetuating what others may perceive as negative stereotypes. One participant reported an example of perceived promiscuity:

I was hanging with gay friends and my being bi came up and one guy was like “basically you’ll fuck anything cause you cant choose?”

A different participant reported an experience that affirmed negative stereotypes about inability for monogamy:

In conversation, my transgender girlfriend (whom I live with and am very serious about) remarked that I must like her because she has both boobs and a penis. I was hurt, not only by the implication that I am attracted to her solely for her body, but by the farther-reaching implication that bisexual people can’t commit to just one type of partner—it reinforces the message that we are “greedy” and that we cannot generally be monogamous, both of which are untrue.

Finally, another participant reported concern with perceptions of her own relationship and sexual behavior, for fear of perpetuating the stereotype that *all* bisexual individuals engage in non-monogamous behavior:

The fact my girlfriend (who is also bi) and I have an open relationship. Someone made a comment to the effect that all bisexuals sleep around so it’ll only really work when two bi people are together. It was incredibly ignorant, but my girlfriend and I are bi and yes, we do sleep around, so it made me feel as though I’m perpetuating negative stereotypes.

Identity threat experiences. Threat experiences were defined to participants as an experience that they felt invalidated their bisexual identity in some way. While threat experiences were reported more frequently than negative identity experiences, there were many themes each category had in common. Bi-negative stereotypes or encounters were again one of the most common experiences, and in this case included many types of bi-negativity such as bisexuality not being a legitimate sexual identity, erasure, general heterosexism, assumed performativity, and inappropriate eroticization. Other reported identity threat experiences included feeling heteronormative, and perceived tension between trans* or genderqueer individuals and bisexuality. As a note, trans* is used as an umbrella term for anyone who may have a transgender or transsexual identity.

Bisexuality as an illegitimate sexual identity. A number of participants reported threat experiences where bisexuality was treated as either a transitional identity or as an identity that people eventually abandoned for a monosexual identity. For example, one participant recounted:

Yesterday was our local Pride. The MC at the drag show invalidated by asking if someone was “lesbian, gay, transgender, or just weird” and then during the identity call-out asked for a show of hands from straight, gay, and “just hasn’t decided yet...you will”

A separate participant reported a similar experience:

In discussion with a gay, formerly married man, he stated that bisexuality is just a waypoint for men who later identify as gay.

Bisexual erasure. Bisexual erasure was expressed in many different ways by the participants. First, one of the ways in which bisexuality was erased was through direct

admissions that bisexuality simply does not exist. Two examples of this sentiment include:

I am not out, but sometimes I wonder if there's any point in coming out. First reason: I'm constantly hearing the sentiment that bisexuality doesn't exist or is just a phase-from both gay and straight people. The topic of bisexuality came up in conversation today among a group of friends when one person who is lesbian and out mentioned how she would never date a woman who identified as bisexual because, in her opinion, such a woman is either a lesbian in denial, or a straight person looking for attention. Furthermore, it seems as if both the gay and straight people who deny that bisexuality exists, do so because they cannot relate to the experience of having had the same type of attraction to both genders.

And:

Someone I thought of as a friend told me, after learning I am bisexual, that she doesn't believe bisexuality exists.

Another way in which participants experienced bisexual erasure was in the omission of bisexuality when sexual and gender minorities in general were being discussed. For example, one participant stated:

A textbook completely erased bisexuality by using the only the terms "gay, lesbian, and transgender" and "gay and lesbian" to refer to LGBT community. A textbook on counseling psychology, by the way.

A different participant reported a similar experience:

I took part in a different study on sexual orientation, which asked for participants who identified as 'other than heterosexual', but then proceeded to assume that all

participants were either gay men or lesbians. This irked me considerably, and made some questions impossible to answer accurately—e.g. ‘Do you feel that you were born gay? (Yes/No).’ I had to answer ‘no’, because I’m not gay, but I do feel that I was born bisexual!

Bisexual erasure was also experienced through assumptions other people make based on the gender of a participant’s partner—specifically that participants paired with a same-sex individual were perceived as homosexual, and those paired with a different-sex individual were perceived as heterosexual. A couple of examples of this type of erasure include:

Somebody I was talking to declared that I seemed gay, then when it was revealed that I have a girlfriend switched his diagnosis to straight without allowing me to correct him.

And

Whenever I meet new people (as I did today, starting new classes), part of my introduction/background is almost invariably that I’m married. I hate that this involves the other person making assumptions about me, even if they are logical. Sometimes this bothers me, sometimes it doesn’t. Today it did.

This particular type of erasure also seemed to be salient for many participants even in deciding how to talk about partners or whether to talk about dating and relationships at all, indicating the pervasiveness of this type of erasure. Potentially this erasure is so frequently experienced that it becomes a significant consideration when people manage having a bisexual identity while being in a relationship with another person. One participant in particular described the complexity of this decision:

Whenever I am speaking to people who don't know me well, I get stuck with how to talk about my relationship status. This happened 2x today, because I have new co-workers and I was talking about my upcoming travel plans.

Do I say, "I'm going to visit my partner?" [They'll likely assume I'm gay] or "My partner and I are meeting up because he's studying abroad right now"? [Likely assume I'm straight]. Do I just say "I'm meeting up with a dear friend..." and never mention a partner? [They assume I'm single or over time wonder if the reason I never talk about dating is because I'm in the closet]. The latter feels really weird. I did that at my last workplace—never talked about dating—because I liked the ambiguity better than the false assumptions that I didn't want to have to go out of my way to correct.

It's not like I'm going to say, "I'm visiting my partner. He's a boy, but I date girls too, FYI" Ugh.

Along a similar line, other participants reported a type of erasure where others simply made incorrect assumptions about their identity without any context of relationship. For example, a participant recorded:

At a party, despite my best efforts to get with guys and not girls for once, I was voted "straightest guy." Not even making this shit up.

Finally, other participants experienced erasure through feeling misidentified or that they were "passing" by either not directly telling others they identified as bisexual or by simply discussing attraction to one gender in particular. Two examples of this include:

Every time I hold myself back from mentioning something to someone because I haven't specifically told them I'm bi, I feel like I'm denying or erasing my bisexual identity. I haven't come out to my friends, and today I saw them for the first time in four months, and I had to hold myself back from talking about girls I've liked or experiences I had several times in one day. It kinda tugs at you inside.

And

I told my brother-in-law that one of the reasons I watched a show was because of the cute guy protagonists. Every time I express vocal interest in the other sex to someone that doesn't know I'm pan it feels like I'm lying by omission about my attraction to my own sex. Because I think about how natural it must sound to that person, and how effortlessly they are assuming—through my statement—that I'm straight.

General heterosexism. In addition to identity threat experiences that specifically targeted bisexuality, participants also described experiences that related to threatening encounters targeting the broader queer community. For example, one participant described how this type of experience affected the work environment:

My coworkers started conversation with me about women and we discussed out preferences in girls for a while, and then some of them were throwing slurs around and talking about another coworker who was absent, that everyone thinks is gay, in a negative way. It definitely reminded me that I cannot be out at work.

Assumed performativity. Some participants detailed encounters where they felt their identity was threatened due to the assumptions by other individuals that bisexuality

in general is merely a performance. In other words, people stated that bisexuality is not a legitimate identity, but rather is a role some people choose to play in order to get attention. For example, a participant reported a situation like this experienced via social media:

Facebook post by a classmate saying bisexuality awareness was a dumb day and that bisexual is just a fake sexuality for girls who want to look hot kissing other girls.

And another person described an encounter involving this assumption at a bar:

I was informed by a gay man at a bar that bisexuals do not exist and are only attention seeking whores.

Inappropriate eroticization. Along a similar vein as assuming bisexuality is a sexual attention-seeking practice, identity threat encounters included instances where participants felt they or their sexual identity was being fetishized. One reported example of this includes:

Someone that I was interested in asked me to tell him, in detail, about sexual encounters I've had with females because "it's really hot," and suggested that I "hook up" with someone he knows because, again, "it would be hot." I felt that this invalidated my sexuality because I (and my sexual preference) was objectified; he saw my sexual experience as something that could sexually arouse him rather than seeing it as a part of who I am.

Feeling heteronormative. Participants who were in a mixed-sex relationship sometimes reported concern with how they were being perceived by others, and in particular that they worried about appearing to fit into heteronormative scripts when they

were in public with their partners. An example of this is detailed by the following narrative:

Really mild, but as my partner and I were walking around holding hands today, and I was looking at all the other straight couples walking around, I suddenly felt self-conscious about seeming to fit right into the straight heteronormative molds.
::squirm::

Tension with trans or genderqueer individuals.* Lastly, a separate threatening identity experienced revolved around feelings of tension between bisexual identity and trans* identities. Through conversations with specific trans* individuals, some participants experienced the notion that bisexual and trans* identities cannot coexist, and that bisexuality can be seen as necessarily erasing trans* identities. Two examples of this type of experience are as follows:

My friend who is genderqueer said I shouldn't be bisexual because it is like saying people like them don't exist, and that "bisexuality" was just a transphobic name for pansexuality.

And

Someone on the internet was saying bisexuality is transphobic but someone else said it's not like you're into two different genders excluding all transgender people, it's more like being into different points on a spectrum of people and that resonated with how I think of myself as bisexual because I like a certain type when it comes to men as well as a certain type when it comes to women, and I'm not against dating transgender people if they're my type.

Positive affirming experiences. While there were many instances of negative or threatening identity experiences, the number of positive affirming experiences vastly outweighed both categories combined. There were many different ways in which participants experienced their bisexual identity in a positive way, or had positive encounters related to their sexual identity. The main themes that emerged for positive encounters includes being around other bisexuals, dating behavior, attraction and sexual behavior, LGBT events, media representation, normalizing bisexuality, and social support. Additionally, many people wrote about how a lack of a negative response was a positive experience for them.

Being around other bisexuals. One of the commonly reported positive identity encounters was simply being in the company of other people who identified as bisexual or pansexual. Many participants reported that these experiences allowed them to feel comfortable and openly discuss anything related to gender and sexuality without fear of being misunderstood or judged, or without the pressure of having to justify their identity. Two examples of this type of encounter are detailed below:

I talked more with my coworker who came out to me and he ended up saying he was poly and pan, and I admitted I was bi rather than totally gay and he was like rock on man I hear you. We talked a bit about the scemantics of bi vs pan sexual because hes dating a transman, but all together it was a great and affirming experience. I did not expect to make a friend at work who got this stuff.

And

I spent some time with some bisexual friends, and we were all very affectionate and open with each other, in a way that made me feel safe and loved.

Dating behavior. Another theme of positive identity experience centered around dating behavior. Some participants described how engaging in positive dating or flirtatious behavior with other individuals allowed them experience their sexual identity. For example, one participant described this type experience with a man:

Made out with a guy, some people there thought I was straight. They thought it was interesting. That usually happens. Also going to meet up with him again on a later date, never done that with a guy before so it could be described as affirmed my bisexual identity :P and it's positive

Another participant described how dating behavior using dating websites was positively affirming:

I just changed my OkCupid profile to be bi instead of straight. Got lots of responses from gay and bi guys—it feels good to be the one pursued!

Attraction and sexual behavior. One of the most reported themes for positive affirming identity experiences was report of attraction and sexual behavior. Many participants expressed how they felt it was verifying to find themselves attracted to multiple people of different genders throughout a day, as was engaging in both partnered or individual sexual behaviors. An example of an event describing attraction includes:

Seeing people, both men and woman, that I would be interested in having some kind of more than platonic relationship with is a good feeling. It is nice to know I have that option.

Another participant wrote about how watching and enjoying bisexual pornography was a positive identity experience.

LGBT events. A number of participants wrote about being actively engaged with general LGBT community events resulted in positive identity experiences. Many participants' local communities were celebrating Pride during the course of this study, which were often included as positive experiences. Additionally, one participant wrote about how running a community group was an affirming experience:

I run a local support group for people of alternative sexuality and gender identities. Mostly BDSM practitioners but a lot of them fall under the LGBT umbrella too. Tonight was this month's meeting and it always affirms my identity as bi, trans* and kinky in a positive way.

Media representation. Another positive identity affirming theme was media representation. When bisexuality was positively included in social media, print media, film or television, participants frequently included that as a positive experience. For example, one participant reported:

I was playing a text-based video game that actually allowed my character customization to include a bisexual identity, and followed through when giving descriptions later.

Normalizing bisexuality. While the queer community overall may be divided on the benefits of normalizing non-heterosexual, non-cisgender identities, many participants described instances where bisexuality was not treated as different or abnormal as positive experiences. Two examples of this include:

A female co-worker made an off-hand comment about a celebrity and his wife both being hot. It was said casually, as if voicing attraction to both genders was no big deal (which is as it should be).

And

My instructor was using an example text that mentioned bisexuality, and she was very matter of fact about it. She treated it like part of the narrative, rather than something terribly unique.

Social support. An additional theme that was recounted by many participants was receiving support in relation to their sexual identity by others. This support was given by many different sources in the lives of the participants. Firstly, some participants reported receiving support from various authority figures as a validating experience. For example, a participant wrote:

Dean of school at a department meeting was talking about going to the counseling center for “personal issues such as you can’t get a girlfriend, or boyfriend, or both.” It was a little moment but it felt very validating to be recognized especially by the faculty of the school.

Other participants described positive experiences where friends or family were supportive of their identity or of bisexuality overall:

Since starting to participate in this study, I have been reading up more on bisexuality, as it is something I have never, ever experienced. I posted a status on my Facebook about it, thanking everyone I knew for not being close minded, for never making me feel that my sexual identity was not valid, for being open and caring and my bisexuality never being an issue. And I got many, many likes and positive comments.

It was pretty great.

Further, several participants detailed how support from their partners was an affirming identity experience:

My partner and I had a long discussion about my sense of sexual identity as a result of exploring the terms of our open relationship. We spoke about what we had in common with regards to our taste in women and how we could incorporate other people into our relationship. It was a very positive and confirming discussion for me as it is always wonderful to be reassured that I am accepted and loved just as I am.

Finally, one other area participants indicated as positive sources of support were their work environments. One example of this is below:

In a discussion with a possible internship site I felt that my perspective as a bisexual activist and writer/theorist on bisexuality and bisexual issues was being considered as a major benefit, as a reason they would want me to intern at the site.

Lack of negative response. Lastly, a number of participants interpreted experiences that did not directly involve a negative response to their identity as a positive affirming event. Two examples of this type of identity experience include:

I hung out with a lesbian friend and discussed same and opposite sex partners without any odd looks or negative reactions.

And

I was at a party and had to tell a group of people my sexuality after having to correct someone about my sexuality. There were no big questions afterwards or weird looks. Overall, it was very accepting to it.

First and last day measures. A repeated-measures ANOVA was performed to compare within-subject responses between the first and last day of the study for positive and negative affect, self-esteem, identity certainty and centrality, and social belonging. There were no significant differences between time one and time two for negative affect, self-esteem, the identity measures, or social belonging. However, there was a significant difference for positive affect. Participants reported a higher average of positive affect at time one ($M=35.69$, $SD=7.10$) compared to time two ($M=33.26$, $SD=7.16$), $F(1,53)=4.085$, $p=.048$. These results indicate that overall, identity certainty and centrality remained fairly stable over the course of the study, as did self-esteem, feeling of social belonging, and negative affect.

Longitudinal trajectories. Structural equation models (SEM) were performed to analyze the trajectories of change in stress, anxiety, and health behaviors over time, and how those changes related to reports of self esteem, identity certainty and centrality, affect, and social belonging. Specifically, a latent growth curve analysis (LGCA) was performed to analyze these changes. As a statistical tool, SEM tests whether hypothesized theoretical models are a good representation of observed data. Typically, in order to be considered a plausible depiction of the data, the model must meet acceptable indices of fit. These indices commonly include the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The CFI value states how much of the variance in the data can be explained by the model, while the SRMR states how much of the variance cannot be explained by it. The CFI critical value is .95, and the value for SRMR should be below .05. The RMSEA provides a chi-square test of model fit adjusted for the

complexity of the model, and typically when the value is lower than .05, it is an indication of good fit. Values from .05-.08 are considered reasonable, and .08-.1 are considered mediocre. Values beyond .1 are considered to be indicators of poor fit (Byrne, 2012). Additionally, the probability that the RMSEA value is in truth below .05 should not be significant.

The initial hypotheses were directed at testing predictions based on IT, namely whether identity verification led to higher levels of positive affect and self esteem, and whether identity threat led to lower levels of identity certainty and centrality as well as to higher levels of negative affect, stress, and negative health behavior. Three separate models were built, testing whether changes in stress, anxiety, and health behaviors as predicted by identity events predicted reports of identity certainty and centrality, affect, self-esteem, and social belonging. As participant reports were aggregated into weekly sums, there was no lag instantiated within the model between reports of identity experiences and the change in stress, anxiety, or health behaviors. I hypothesized that the effect of an identity experience on these outcomes would be fairly immediate, and therefore any potential effect may have been lost if a lag was built in to the model.

The estimated model fit data were below acceptable levels of model fit in each case, and thus it can be suggested that it may not be plausible that the proposed models are representative of the data. Specifically for the stress model, the CFI and RMSEA values were reasonable at .981 and .074 respectively, and the probability test of the RMSEA was not significant ($p = .157$). However, the SRMR was at .052. The model for anxiety also had reasonable indices of fit for the CFI (.968) and the RMSEA (.083, $p = .054$), but the SRMR value was again above acceptable levels at .064. Finally, the

health model fit indices showed reasonable fit for the CFI (.969), but the RMSEA value was significant (.095, $p = .021$), and the SRMR was above acceptable levels at .075.

Additionally, due to the large number of parameter estimates in each model, the sample size may not be large enough to result in trustworthy estimates of standard error. As this information is not highly informative, other than it may be inaccurate to hypothesize that positive and negative identity events lead to changes in stress, anxiety, and health behaviors that ultimately lead to changes in identity, affect, social belonging, and self-esteem, I tested another model using these variables as predictors for change.

Based on the uncertainty reduction hypothesis in SIT (Hogg, 2004), it is reasonable to hypothesize that individuals who have a higher level of identity certainty would experience less distress and therefore would report lower levels of stress and anxiety over the course of a month. Additionally, self-esteem is thought to have a protective moderating effect and is associated with lower rates of depression and anxiety (Greenberg, Solomon, Pyszczynski, Rosenblatt, Burling, Lyon, Simon, & Pinel, 1992; Mann, Hosman, Schaalma, & de Vries, 2004). Finally, positive affect is associated with lower levels of stress and anxiety, and negative affect has been found to be associated with higher levels of stress and anxiety (Brown, Chorpita, & Barlow, 1998; Dua, 1993; Folkman & Moskowitz, 2000). Thus, there is a foundation in the psychological literature that would support using SEM to examine whether identity certainty and centrality, affect, self-esteem, and social belonging are associated with changes in stress, anxiety, and health behaviors. The path analysis for each model is depicted in Figures 3-5.

Reports of stress decreased over the course of the month from weekly ratings of 14.22 in week one, to ratings of 9.42 in week four. Without the inclusion of positive and

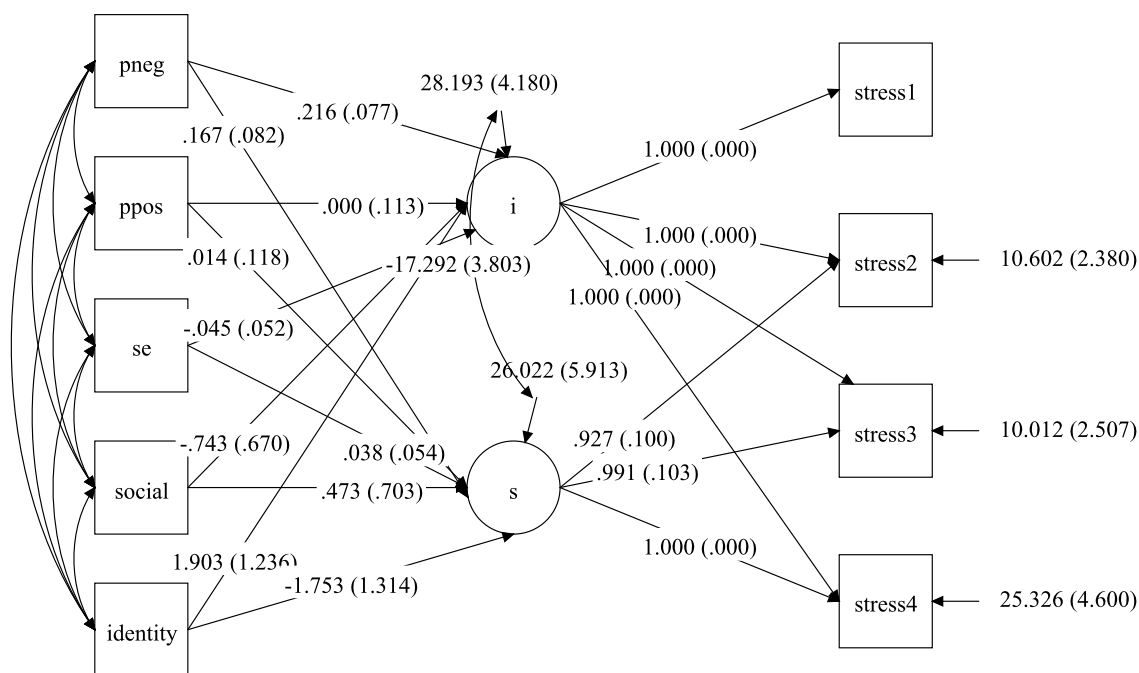


Figure 3. SEM path analysis predicting initial status and change in stress based on initial reports of negative affect, positive affect, self-esteem, social belonging, and identity certainty and centrality.

negative identity events, the number of free parameters is 20, and the model fit information indicates that the proposed model is a reasonable representation of the data. The CFI value is above .95 (CFI = .963), the RMSEA = .090, and is non-significant ($p = .132$), and the SRMR is acceptable at .036. The following intercept and slope information was calculated with the use of MPlus. The model results indicate that level of negative affect at the start of the month is significantly related to both the intercept and slope of the model, and specifically is associated with a higher initial status of stress (Intercept on Negative Affect; .216, Estimate/SE = 2.83, $p = .005$) and positive increase in stress over time (Slope on Negative Affect; .167, Estimate/SE = 2.04, $p = .041$). Having higher levels of negative affect at the start of the month is associated with an

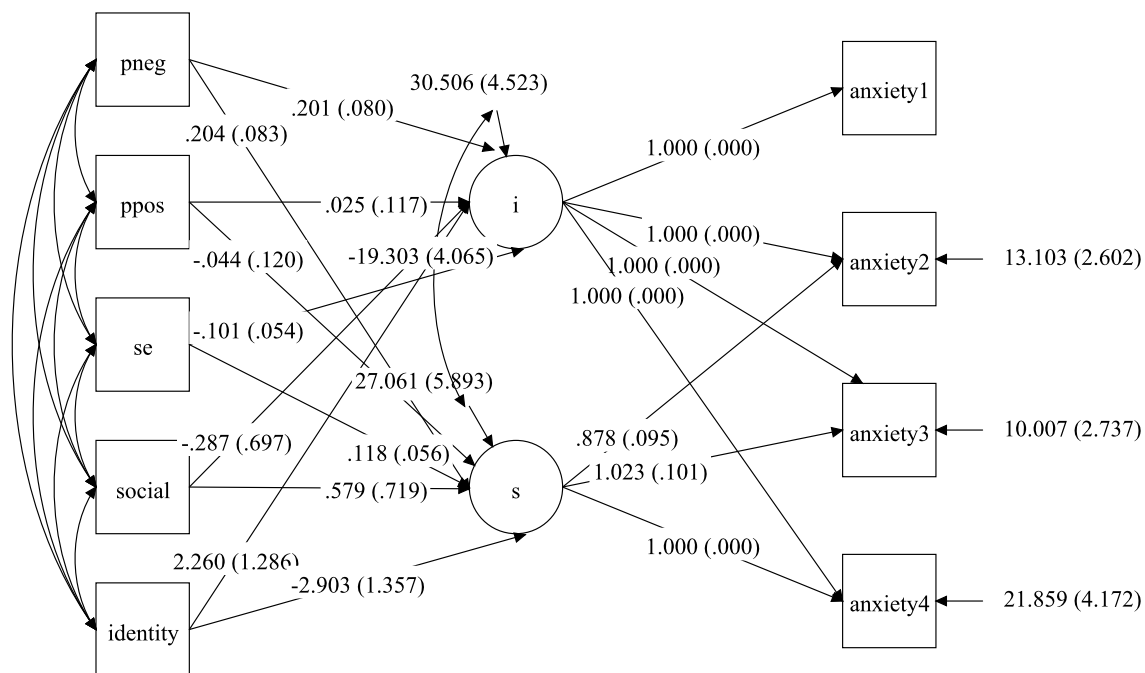


Figure 4. SEM path analysis predicting initial status and change in anxiety based on initial reports of negative affect, positive affect, self-esteem, social belonging, and identity certainty and centrality.

initial status of stress that is .216 units higher, and an increase of .167 units of stress over the course of the month. None of the other predictors significantly predicted initial status or rate of change.

As with stress, weekly reports of anxiety ratings decreased over the month starting at 13.82 in week one, to 9.35 in week four. The model fit information indicates the identified model is plausible, as the CFI value is beyond .95 (CFI = .953), the RMSEA is at .1 and is not significant ($p = .074$), and the SRMR is acceptable at .032. The model indicates that negative affect is a significant predictor for initial status of anxiety (Intercept on Negative Affect; .201, Estimate/S.E. = 2.52, $p = .012$), and negative affect, self-esteem, and identity certainty and centrality are all significant predictors of change in anxiety over the course of the month. Specifically, negative affect was

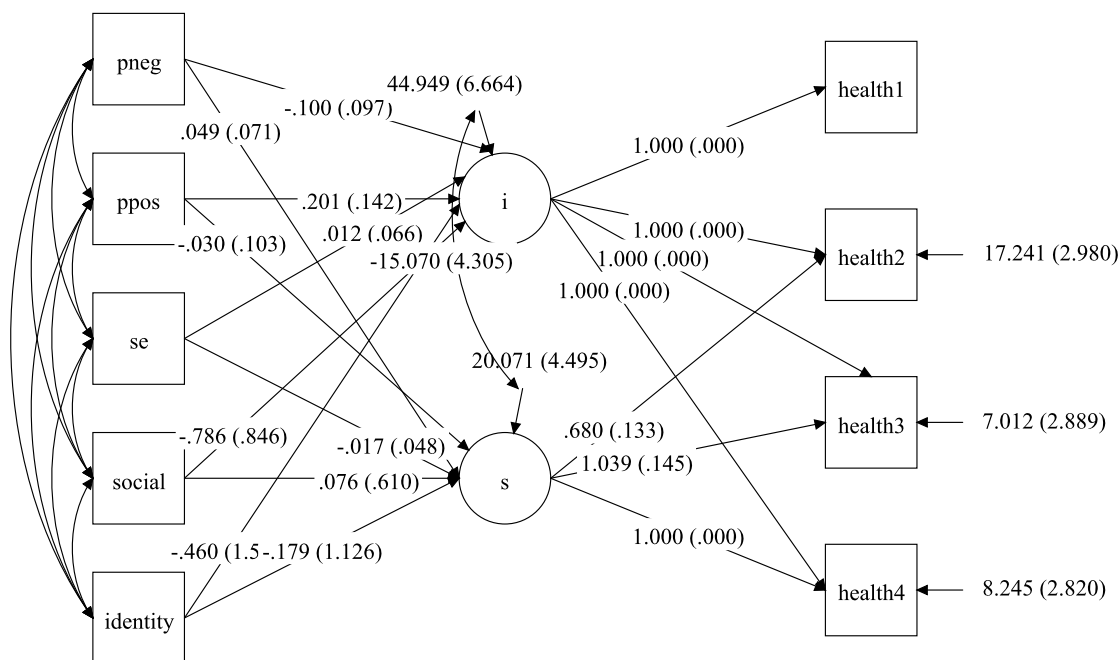


Figure 5. SEM path analysis predicting initial status and change in health behaviors based on initial reports of negative affect, positive affect, self-esteem, social belonging, and identity certainty and centrality.

positively related to anxiety (Slope on Negative Affect; .204, Estimate/S.E. = 2.45, $p = .014$) as was self-esteem (Slope on Self Esteem; .118, Estimate/S.E. = 2.11, $p = .035$). The strongest relationship was between identity certainty and centrality and change in anxiety, which was a negative relationship (Slope on Identity; -2.90, Estimate/S.E. = -2.14, $p = .032$). These results indicate that higher levels of negative affect are associated with a higher initial status of anxiety by .201 units, and an increase of anxiety over the month by .204 units. Counter-intuitively, higher levels of self-esteem are also associated with an increase in anxiety over the month by .118 units. Finally, greater levels of identity certainty and centrality are associated with a decrease in anxiety over time by 2.9 units.

Negative health behaviors increased over the four week period, starting at an average of .044 (positive) health behaviors in week one and increasing to -1.066 health behaviors by week 4. The model fit data indicates reasonable fit, as the CFI = .956, the RMSEA = .097, $p = .093$, and the SRMR = .042. However, none of the predictors were significant, indicating that affect, self-esteem, social belonging, and identity certainty and centrality to not significantly affect the initial status of health behaviors, or the change in health behaviors engaged in over the course of the month.

Longitudinal correlations. To perform correlations among the positive and negative identity events with the variables of positive and negative affect, self-esteem, social belonging, and identity certainty and centrality, all positive and negative identity events were aggregated into two scores: one score that is the sum of all positive identity affirming events a participant experienced over the course of the month, and one score that is the sum of all identity threat and negative identity affirming events each participant experienced in the duration of the study. I tested the correlations between both the first reports of the dependent variables and the posttest results.

For the correlations between the first reports, positive identity event score was positively correlated with identity certainty and centrality ($r = .391, p = .002$) and with the negative identity event score ($r = .585, p < .001$). The negative identity even score was positively correlated with identity certainty and centrality ($r = .253$). Further, negative affect was significantly negatively correlated with positive affect ($r = -.449, p < .001$) and self-esteem ($r = -.629, p < .001$). Positive affect was also positively significantly related to self-esteem ($r = .556, p < .001$). Social belonging was positively

related to identity certainty and centrality ($r = .343, p = .004$), and Identity certainty and centrality was also positively related to positive affect ($r = .312, p = .008$).

For the posttest results, the positive and negative identity event scores were not significantly related to any of the variables. Positive and negative affect were still negatively associated ($r = -.353, p = .003$), and negative affect was also still negatively associated with self-esteem ($r = -.603, p < .001$). Positive affect was positively associated with self-esteem ($r = .551, p < .001$). Finally, identity certainty and centrality was positively associated with social belonging ($r = .471, p < .001$).

Finally, participants' reports of how they feel about their sexual identity were not significantly related to the number of positive and negative identity events experienced, but it was significantly related to negative affect ($r = -.260, p = .032$), positive affect ($r = .370, p = .002$), self-esteem ($r = .278, p = .022$), and identity certainty and centrality ($r = .419, p < .001$).

Discussion

The purpose of this work was to both test current psychological theory that is widely accepted and used to describe identity and social identity on whether it is applicable to bisexual identity, as well as generate more knowledge about bisexual identity and experience. The first goal of this research was accomplished through manipulating the perception of prototypicality with a bisexual sample in order to see whether how that manipulation affected an individual's feeling of affect, social belonging, identity certainty and centrality, and self-esteem would be as Social Identity Theory and Self-Categorization Theory would predict. In the case of this research, the results did not support the predictions of SIT or SCT, thus indicating these theories may not be appropriate to use in their current form as a theoretical framework for understanding bisexual identity as a social identity. This is further discussed below.

The other theory that was tested with the current research was Identity Theory, and in particular whether experiences of bisexual identity verification and non-verification predicted changes in affect and health for bisexual people. Again, the results of this research do not support the predictions generated from IT, suggesting that this theoretical framework may also not be appropriate to use to explain the experience of bisexual identity. These findings are also further discussed below.

Finally, another goal of these studies was to expand current knowledge about bisexual people, identity, and experience. It is becoming more and more clear that it is imperative to work with bisexual communities specifically (and not just only in the context of sexual minorities generally) due to the serious differences in mental and physical health between bisexual people and people of other sexual identities. Further,

continually homogenizing sexual minority groups in psychological research erases the diversity that occurs naturally within the queer community. This practice has the potential to create misunderstanding or inaccurate information about the health and well-being of sexual and gender minorities, as well as erase important differences that exist within the community. Though the current research, three new scales were developed and tested that are specific to use with bisexual populations, further understanding of how current mainstream psychological identity theory applies to bisexual identity was pursued, and a wealth of information was gathered concerning how people experience their bisexual identities on a day to day basis. Each of these factors are discussed in turn below.

Measures

As stated previously, scales were created and/or modified in order to be appropriate for addressing identity and social belonging issues with a bisexual population. Factor analyses and reliability assessments were performed for each of these scales, the results of which are discussed in turn below.

Identity certainty and centrality measures. While the Identity Certainty and Centrality measures were treated as one measure with two related subscales (i.e. one subscale for identity certainty and another for centrality) in the current study, the preliminary analysis of inter-item correlations suggest that this scale should be broken down into two independent measures in the future. The correlations between the centrality items and the certainty items were below the magnitude of what is typically considered an indicator that subscales are measuring related phenomena. Thus, it appears as though bisexual identity certainty and identity centrality are relatively independent constructs.

Identity centrality scale. After performing a factor analysis on the eight items included on the identity centrality scale, it became apparent that there are two components to the scale. The items included in each component speak to two different general concepts: individual identity concerns and relational identity concerns. The individual identity component items mostly center on the notion of how important a bisexual identity is to one's individual identity. For example, one item states, "Being bisexual has little to do with how I feel about myself," while another item states, "Being bisexual is an important part of my self image." In comparison, the relational identity concerns address aspects of identity centrality that refer more to how one's bisexual identity is intertwined with relations to other bisexual individuals. The two items in this component include: "I have a strong sense of belonging to other bisexual people," and "I have a strong sense of attachment to other bisexual people."

Both of these components are in line with how Identity Theory (IT) theorists frame identity commitment. Stets and Burke (2000) describe identity commitment as being a two-fold process: commitment can be measured both by the strength of identity and the number of relations one has because of a particular identity. Many of the items in the individual identity speak to the strength of one's bisexual identity, as they require participants to evaluate how strong of an influence being bisexual is on their overall identity. Further, the relational identity items are more demonstrative of the relation aspect of IT theorists' definition of identity commitment, as they are aimed at evaluating a person's relationships within the community of bisexual people. Identity centrality and identity commitment may be synonymous with one another, at least as measured by this scale. As this scale has been modified to address identity centrality for many different

types of identities (e.g. Settles, 2004), then IT theorists may be able to use this general framework of a scale as another way of measuring identity commitment.

Identity certainty scale. The factor analysis conducted on the ten identity certainty items revealed three components: subjective certainty, experience dependent certainty, and experience independent certainty. The subjective certainty items are direct assessments of participants' own (i.e. subjective) feelings of certainty in their identity. This component includes two items: "I feel certain about my sexual identity," and "I feel secure in my sexual identity." The second component, experience dependent certainty, includes items that address how much one's past romantic and sexual experiences influence how certain one is in his or her identity, and includes items such as: "I feel like I have not had enough other-sex sexual experiences to be fully comfortable with claiming a bisexual identity." Finally, the experience independent certainty component items speak to identity certainty being a separate consideration from the sexual and/or romantic histories of participants. For example, one item states, "My level of comfort with my bisexual identity is not dependent upon my past or present sexual behavior."

While the centrality items may speak more directly to identity commitment from an IT perspective, the identity certainty items address components of Social Identity Theory (SIT). It may be that one's security or certainty in his or her adoption of the bisexual label may align with how accurately he or she feels he or she meets the prescribed trait elements of a bisexual identity. However, as stated in the introduction, one possible reason why bisexual individuals may struggle with a cohesive social identity is because there does not seem to be an obvious and dominant bisexual profile (Weinberg, Williams, & Pryor, 1994). In addition to this unclear set of "standards," there

are several stereotypes about what it means to be bisexual that seem to be very salient to many bisexual individuals, such as the burden of proof proposed by Deschamps (2008). The combination of ambiguous identity profiles and stereotypes may influence participant responses on the items included in the experience dependent component, as these items speak directly to linking the amount of experience with various genders as a standard for gauging how comfortable one is in claiming a bisexual identity. It is possible that if one has internalized the bi-prejudicial sentiment that one is not “really bisexual” unless he or she has significant sexual or romantic experience with more than one gender, his or her responses to these items may play a larger role in overall certainty scores.

Social belonging. The final scale that a factor analysis was performed on was the social belonging scale. The factor analysis revealed that this scale consists of one component, which addresses how strongly one feels connected to the bisexual community, as well as how one feels about being member of the bisexual community. While the scale is statistically valid, it may be prudent to revise it in the future to address participants’ feelings of the existence of the bisexual community overall. Anecdotally, many participants who completed this scale reported they felt somewhat stumped as to how to respond to the items because they did not feel as though there was a bisexual community. This may conflate their responses, as participants may respond they do not feel as though they are a part of the bisexual community because of lack of community rather than feeling estranged from an existing community.

Study One

The general research question, whether feelings of bisexual prototypicality affects feelings of identity certainty and centrality, affect, self-esteem, social belonging, and

stress as SIT and SCT predict, was not supported by this research. Additionally, the mediational analysis performed to test whether identity certainty and centrality mediated the relationship between feeling of prototypicality and the other dependent variables was not significant. Thus, this discussion will largely focus on the effects of the manipulation of prototypicality on the dependent variables.

Since the Social Identity Approach indicates that assuming social identities involves a process of depersonalization, a process in which individual group members attempt to embody the salient features of a social identity as closely as possible, it is necessary—based on this theory—for there to be a group prototype. This prototypical group member embodies all of the features of the social identity, and may or may not be a real person (Hogg, 2006). SIT and SCT would predict that the more one is able to conform to the image of the ideal group member, the more benefits one would receive—i.e., group members that are perceived as more prototypical may have higher levels of positive affect, self-esteem, feeling of belonging, and reduced levels of negative affect, stress, and uncertainty (Hogg, 2006; Luthanen & Crocker, 1992).

In the context of this study, the above information would lead to the prediction that bisexual participants who felt they were further from the group ideal, or the group prototype, would have lower levels of feeling of belonging, positive affect, and self-esteem, and higher levels of negative affect, stress, and identity uncertainty. However, the results from this study do not support this prediction. While the overall MANOVA assessing intergroup differences was not significant, i.e. there was not a significant difference between participants who were in the high prototypicality group compared with participants in the low prototypicality group on any of the dependent measures, the

data were trending in a direction that is oppositional to the predictions based on SIT and SCT.

Specifically, participants who were in the low prototypicality group had marginally significant higher levels of self-esteem and identity certainty, and marginally significant lower levels of negative affect. Additionally, the data were also trending in the opposite direction predicted by SIT and SCT for positive affect. However as this result was not marginally significant, these results support no difference for positive affect between high and low levels of prototypicality. Further, there was no evidence for difference on the measures of social belonging and stress based on difference in perceived prototypicality.

While there was not a difference based on condition for stress as it was measured by the GSR, there was a significant overall effect. In other words, there was a significant difference in level of stress between the baseline measures and the GSR measure taken directly after participants received feedback about their sexual identity prototypicality, where GSR ratings were higher in the post-test. This result indicates that it may be a physiologically stressful experience or exciting experience to receive feedback about one's identity, regardless of the type of feedback. This potentially makes sense in the light of how little information and representation there is for bisexuality and bisexual identity. If bisexual individuals are used to experiences of erasure and other minimizing effects of bi-negativity, having one's identity affirmed at all, or having bisexuality affirmed as a legitimate identity, may inspire a physiological reaction.

Finally, while not significant, the correlational relationships between identity certainty and the other dependent variables trends in a direction that would support the

identity uncertainty reduction hypothesis for motivation to adopt a social identity.

Identity certainty was insignificantly positively associated with positive affect and self-esteem, and was negatively (insignificantly) associated with negative affect and increase in stress. If these relationships became significant with more statistical power, it would suggest that having lower levels of identity uncertainty overall may be related to higher levels of positive affect and self esteem, as well as lower levels of negative affect and stress.

Possible explanations. While I do not have a way to assess why participants responded the way they did to the prototypicality manipulation in the current study, I have a few speculations that can be tested in further research. These explanations pertain to the applicability of SIT and SCT to bisexuality as a social identity, as well as to the applicability of these theories to more ambiguous social identities overall, potential influence of internalized negative stereotypes about bisexuals, and possible elements of a bisexual identity that may have confounded the manipulation of prototypicality. I will address each of these potential explanations below.

As the results of this study do not support the predictions of SIT and SCT, it is possible that these theories are not expandable to explain bisexuality as a social identity. It may be the case that since there is no salient, agreed upon, dominant profile of a bisexual personality, people who identify as bisexual may have a weaker representation of the “ideal, prototypical bisexual” to influence their depersonalization process. This in turn may change how their perceived relationship to that prototype affects variables such as mood, stress, self-esteem, belonging, and identity certainty. Anecdotally, while the majority of participants agreed with their assigned prototypicality rating, a few responded

that they did not know any other bisexual people and had no way of knowing previously how similar or dissimilar they were in terms of a prototypical bisexual identity. Perhaps this lack of knowledge or consideration of what it means to members of the bisexual community to be a “prototypical bisexual” makes it difficult for typical processes of social identity and self-categorization to take place.

Further, the results of this study are possible implications for the efficacy of SIT and SCT to apply to ambiguous social identities overall. Perhaps it is not just being bisexual that makes it difficult for these theories to explain the social identity process, but rather any identity that did not have a salient prototypical representation would have difficulty being explained by SIT and SCT. For example, the people who identify as biracial or multiracial could potentially have similar experiences of not being able to identify and relate to the “prototypical biracial or multiracial person,” and thus may have different social identity processes related to feeling more or less similar to potential prototypes.

The next potential explanation for the participant responses in this study is the possibility of internalized bi-negative stereotypes of what it would mean to be a prototypical bisexual. While we did not measure internalized bi-negativity, it could be a possible topic for future research to investigate whether or not such prejudice plays a role in social identity processes for bisexual individuals. Bi-negative stereotypes still abound in society. If the participants internalized these stereotypes, then being told one was closer to a prototypical bisexual personality may be associated with feeling as though one also embodies these stereotypes. Thus, if the participants in the high prototypicality condition felt that they were being told that they were confused about their sexuality, just

experiencing a phase, promiscuous, unable to be faithful to romantic partners, or any other of the myriad of stereotypes, it could be associated with an increase in negative affect, a decrease in self-esteem, and potentially even a desire to distance oneself with bisexual identity resulting in lower levels of identity centrality and certainty. Past research has found negative consequences of internalized bi-negativity (e.g. Ochs, 1996) and significant relationship between bisexual identity congruence and internalized bi-negativity (Hoang, Holloway, & Mendoza, 2011).

Finally, a third possible explanation for the study results is the possibility that the manipulation of prototypicality is being conflated with another important element of bisexual identity. As bisexual individuals face prejudice and discrimination based on others' reactions to their sexual identity, many bisexual people have adapted and found strategies for resiliency—to maintain positive identities by finding ways to combat negative messages about bisexuality. One possible maintenance strategy is to embrace the idea of difference, which is a component of queer theory and is embraced by other members of the queer community. If participants had incorporated this idea of uniqueness into their overall identity, then having that affirmed by being told they are very different from the “prototypical bisexual” could be a positive experience. Anecdotally, many of the participants in the low prototypicality condition were either excited or not surprised by being told that they were different because they either had always known that they were different, or because it made them feel that they were unique and special.

Study Two

The discussion of the results from Study Two is broken down into several different components, starting first with participants' definitions of bisexuality, followed

by their microaggression experiences and identity experience narratives. Next, the longitudinal trajectories as assessed by SEM are addressed, which includes discussion of the hypotheses for Study Two. Lastly, the longitudinal data correlations are discussed.

Bisexuality definitions. The most commonly endorsed definition of bisexuality on the checklist was “Someone who has the capacity for sexual interest with at least two genders,” which was closely followed by the number of participants who endorsed “Someone who has the capacity for romantic interest with at least two genders,” and “Someone who is sexually interested in at least two genders.” It seems as though the majority of participants were more likely to endorse definitions that alluded to the ability or interest in two or more genders either romantically or sexually rather than actual romantic or sexual experience with two or more genders. This sentiment was echoed in many participants’ open-ended responses, as a number of participants expressed there was no minimum standard of experience to be able to identify as bisexual.

Noticeably, zero participants endorsed the checklist statements that defined bisexuality in terms of capacity or experiences with only one gender. Thus, it appears that generally the participants set a minimum standard of at least having the capacity or interest in more than one gender in order to identify someone as bisexual, which seems fairly intuitive. It is interesting that no one endorsed the statement that “Someone who had had relationships/sex with only one gender” as a possible definition of bisexual, since the mirrored statements of having had relationships or sex with at least two genders was not supported by the majority of participants as a necessary component of bisexuality. It is possible that participants interpreted that statement as only having romantic or sexual

experience with one gender due to only being interested in romantic or sexual relationships with one gender, rather than just due to circumstance.

Microaggression experiences. As stated in the results section, the most frequently reported microaggressions deal with verbal hassles and harassments—derogatory use of the word gay and hearing the use of other sexual minority slurs. However, it was much less frequent for someone to specifically have had someone use a sexual minority slur against them personally, which suggests that potentially the participants in this study witness more environmental hostility toward sexual minorities (at least in term of verbal microaggressions) than they are individually targeted for verbal harassment in relation to their sexual identity.

The other most frequently reported microaggressions are more specific to bisexuality as opposed to the LGBTQ community at large. In particular, the more common microaggressions related to issues of bisexual erasure. There were many instances reported of others assuming that the participants were either heterosexual or homosexual, as well as of bisexuality being omitted from general discussions of sexual minorities. Each of these types of microaggressions were also detailed in the narratives about negative affirming and threatening identity experiences, which allows for more context in describing what these types of erasure look like when they happen. The comparatively high frequency of these erasure microaggressions is also support for the frequently cited problem of erasure and invisibility as being one of the most pervasive problems for bisexual individuals and the bisexual community (Barker & Langdrige, 2008).

Some of the microaggressions that had comparatively moderate frequencies were mainly related to bi-negativity associated with perceptions of bisexuality as an unstable or illegitimate identity. For example, there were a fair number of reports of people stating or implying that bisexuality is not a real identity, that bisexuality is just a phase, or that bisexuality was a transitional identity (in the context of participants being told they would not identify as bisexual later). Again, each of these types of microaggression is also represented in the qualitative responses about negative affirming and threatening identity experiences.

Identity experiences. One of the richest outcomes of this study was the qualitative information given by participants that detailed their positive and negative identity experiences. While bisexuality researchers frequently discuss the existence and consequences of bi-negativity, it is informative to actually have the specifics of bi-negative experiences as they happen to people. Additionally, it is instructive to see features of positive identity experiences and to learn more about what bisexual people consider positive identity experiences. This information can potentially help give direction to programming focused at increasing the potential for positive, thriving experiences for bisexual people. The general themes for negative affirming experiences, threatening experiences, and positive affirming experiences are discussed below.

Negative affirming experiences. Participant narratives about negative affirming identity experiences, or those experiences that recognize the existence of bisexuality but in a negative way, give context to what these experiences entail. The occurrence of these events also is evidence that bisexual individuals face very real stigma based on their sexual identity. The common themes of negative affirming experiences were: concern

with the reaction of others, inappropriate eroticization, dismissal or erasure of bisexuality, and other bi-negative stereotypes. Participants also reported that they experienced these types of negativity from both heterosexual and homosexual individuals, as is often reported in bisexual stigma research (Barker & Langdridge, 2008; Ochs, 1996).

The first theme, concern with the reactions of others, seems to largely stem from either past experience with or knowledge of bi-negative stigma. Participants who expressed this concern stated worries about others objectifying their sexuality once they found out they were bisexual, or worries about others passing negative judgments about them based solely on having a bisexual identity. Without previous experiences or familiarity with these types of prejudicial behavior, it is unlikely that bisexual individuals would harbor concern with coming out to others and what it would mean for how they would be treated by those they came out to. Thus, it seems like exposure to bi-negativity may influence some bisexual individuals to be concerned about others' reactions.

The second theme, inappropriate eroticization, is also echoed in the identity threat narratives. In particular, the participant responses allude to either the sexualization of bisexuality as an identity—perhaps associated with the stereotype that bisexual people are hypersexual—or to the idea that female bisexuals engage in same-sex relationship and sexual behavior for the sexual gratification of men. This ties in closely with the idea of performative bisexuality, the notion that people (and in particular young, heterosexual women) perform bisexual behavior in order to be perceived as sexually desirable by men (Fahs, 2009). One participant in particular stated that she found this performativity frustrating because she felt it caused others to both take her bisexual identity less seriously and to inappropriately sexualize her identity. Other participants reported how

other homosexual or heterosexual individuals assumed they were merely playing a role—not that they were actually bisexual. As both of the third and fourth themes are included in reports of identity threat, discussion on each will be reserved for the next section.

Threat experiences. Identity threat, or non-verification, experiences are typically discussed in the IT literature as instances in which others do not accurately perceive or evaluate another person's identity. While some of the responses participants submitted did fit with this type of identity experience, many others were reports of generally negative experiences. The main themes that emerged from these reports were various forms of bi-negativity: bisexuality as an illegitimate identity, bisexual erasure, general heterosexism, and assumed performativity and inappropriate eroticization (as discussed in the previous section). Additionally, themes of tension between bisexuality and trans* identity and feelings of heteronormativity were included in participants' narratives about identity threat.

The first theme, bisexuality as an illegitimate identity, is represented as a moderately common occurrence in participants' reports of daily microaggressions, and is a frequently cited instance of bi-negativity (e.g., Eliason, 1997). In participants' open-ended responses, this theme was represented both as bisexuality being presented as a transitory identity, or as an identity for individuals who are confused and have yet to "make up their mind" about being gay or straight. In both instances, bisexuality was not seen as a legitimate or stable sexual identity unto itself. As with many of the other types of identity threat and negative identity experiences, this type of bi-negativity was expressed to participants by both heterosexual and non-heterosexual individuals.

The second theme, bisexual erasure, was one of the most commonly discussed identity threat experiences. Further, it was the most common bisexual-specific type of microaggression reported by participants over the course of the study. As stated previously, this lends further credence to the statement that bisexual erasure continues to be one of the most insidious problems for bisexual individuals and communities. For this particular study, participants reported experiencing bisexual erasure in many different ways. Some experiences were more subtle, such as the omission of bisexuality when institutions or individuals were addressing sexual minorities and sexual minority issues. Another way in which participants found their identity erased was when others made assumptions about sexuality based on the gender of their current partner, as is common (Ochs, 1996). The salience of this type of erasure is evident for some of the participants, as they reported frequent frustrations of having to handle either being mislabeled if they chose to disclose being with a particular partner, or deal with correcting faulty assumptions about their sexuality. Finally, some methods of bisexual erasure were incredibly overt, with some participants being told blankly by others that bisexuality does not exist.

The third theme, general heterosexism, is another theme found both in participants' open-ended responses and their reports of microaggression. Typically, this was reported as experienced from friend groups or coworkers. In some instances, the participants were not out to their friends or coworkers, and so the heterosexual conversations that took place in those settings both created a hostile environment for these participants, and influenced some to remain unidentified as bisexual at work or with their friends. In other instances, the participants took steps to inform their friends or

coworkers that they did not endorse heterosexist views. Two participants actually created change at their workplaces by educating fellow domestic violence educators about models of domestic violence among gender and sexual minorities and by having their place of employment include bisexuality in information about sexual minority bullying. Discussion of the fourth and fifth themes, assumed performativity and inappropriate eroticization, can be found in the previous section.

The sixth theme, feeling heteronormative, was expressed by a few participants who were currently primarily in mixed-sex relationships. This theme potentially relates to voluntary and involuntary “passing,” or being seen as heterosexual by others. Other researchers have pointed out how passing as straight can result in feelings of discomfort or guilt for bisexual individuals, which is supported by the open-ended responses of participants who worried about being seen as heteronormative. In some cases, participants reported guilt because they felt as though they were “lying by omission” when they discussed attractions to someone of a different sex. In others, participants expressed being self-conscious when they felt they were appearing heterosexual to others.

Finally, the last theme expressed in the identity threat category was tension between bisexuality and some trans* or genderqueer individuals. While some participants did implicitly endorse through their language they were attracted to two genders or thought of gender in a binary system, many people who identify as bisexual do not interpret bisexuality to mean “just two.” A number of participants reported assumptions that “bi means two” were actually negative identity experiences, as they defined their bisexual identity in much broader terms than that. Further, many of the genderqueer participants in the current research also identify as bisexual. In fact, one form of bi-

negativity that has been researched is the notion that a bisexual identity should take a backseat to other identities, such as gender minority identities, which has resulted in some consequences like difficulty accessing appropriate healthcare for trans* bisexuals (Eady, Ross, & Dobinson, 2011). Thus, while it is important to address the potential for trans* erasure within other sexual identities, bisexuality does not, as a rule, negate gender minority identities. It may be more constructive to address how we define, conceptualize, and discuss bisexuality as opposed to assuming all who identify as bisexual do so in a way that reifies a binary system of gender.

Positive affirming experiences. As stated in previous sections, the amount of positive identity experiences outweighed the number of negative experiences by approximately 2.5:1. For positive identity experiences, the main themes were being around other bisexual or pansexual individuals, dating behavior, attraction and sexual behavior, LGBT community events, media representations, normalizing bisexuality, and social support.

Theme one, spending time with other bisexual or pansexual people, supports the notion that community for bisexual people is important, and thus combating issues surrounding invisibility of the bisexual community could help increase the amount of positive experiences bisexual people have in relation to their sexual identity. Some of the narratives given by participants include how being around others of a similar identity allows them to relax and feel safe discussing anything without worry of needing to explain, justify, or defend their sexual identity. Other participants discussed times when they were able to talk specifically about the rewarding and challenging aspects of being bisexual, and could lend one another advice and encouragement. Further, some

participants detailed how they found being among other bisexual people reassuring that their identities and attractions were not bizarre or out of the ordinary. Overall, it seems as though spending time around other bisexual or pansexual people was a positive and healthy experience for many bisexual individuals, and allowed for a safe and supportive environment.

The second and third themes, dating behavior and attraction and sexual behavior, were frequently offered as ways in which participants positively experienced their sexual identity. Some of the narratives were about how going on dates with someone of a gender they did not typically date was affirming, while others found it validating to their bisexual identity when they found themselves able to flirt with more than one gender. Additionally, many participants wrote about finding themselves attracted to more than one gender throughout a day was not only affirming for the stability of their bisexual identity, but also that it was a positive experience knowing they had the capacity to be attracted to more than one gender. It appears that interaction with others in terms of dating, attraction, and sexual behavior definitely has the potential for creating a positive identity atmosphere for people who identify as bisexual. Further, individual behaviors like watching mixed-sex, same-sex, or bisexually inclusive pornography, or having erotic dreams, were reported as positive affirming identity experiences.

Attending LGBT events, the fifth theme, was included in both positive and negative or threatening narratives. While some participants spoke about instances of bisexual erasure or underrepresentation of bisexual people at LGBT events and spaces (such as Pride events, gay bars, community meetings for LGBT people, etc.), others wrote about how being involved in the larger LGBT community was a positive and

important experience. This is in line with previous research on the benefits of being actively involved in community for sexual minorities (e.g., Ramirez-Valles, 2002), and indicates the positive power of inclusion within the general LGBT community for bisexually identified individuals.

The sixth theme, media representation, is a great example of how positive visibility within different media is important for helping generate positive affirming identity experiences for bisexual people. While there still are very few positive representations of bisexual people in mainstream media, many participants in this study spoke about seeking out social media where bisexuality was positively represented and discussed—such as the bisexual subreddit community, bi-positive Facebook posts, and other internet-based media like blogs that focus on bisexual advocacy and activism. A few participants discussed how inclusion of bisexual characters within videogames and novels was also a way in which they felt their identity was positively affirmed. This lends further evidence to the importance for positive visibility and for bisexual representation within the media, an issue which has been slated as important for many other minority or marginalized groups. This importance is magnified as it seems to be the case that in relation to media, lack of representation is associated with more negative attitudes toward sexual minorities (as is negative representation), whereas positive representation is associated with more positive attitudes toward sexual minorities (Bonds-Raacke, Cady, Schlegel, Harris, & Firebaugh, 2007).. Thus, media representation may not only be important for bisexual individuals themselves to experience affirming identity events, but also to help change negative attitudes other people may have about bisexuality.

The next theme, normalizing bisexuality, was expressed as a positive experience when participants felt that bisexuality or the capacity for attraction to more than one gender was discussed as normative, ordinary aspect of sexual behavior or identity. This normalization is potentially related to the theme discussing lack of a negative response, as each theme seems to indicate having others treat bisexuality as neither positive nor negative, just neutral, was perceived as a positively affirming experience. Perhaps if one is expecting others to negatively react or be prejudicial toward bisexuality, it is a relief to not have that experience.

Finally, social support was one of the most commonly reported themes in the positive narratives. Just as being around other bisexual or pansexual people was frequently a positive and supportive environment for the participants, many people reported that receiving support from authority figures, work environments, friends, family, and partners was a way to positively affirm their bisexual identity. This support came in many different formats, ranging from faculty and medical staff recognizing and validating bisexuality as a legitimate sexual identity, to having knowledge and experience with bisexuality and bisexual issues be perceived as a beneficial skill in the work environment, to having open conversations with romantic partners about how to ensure the participants' bisexual identity was not erased by the relationship. In general, it appears to be a positive experience to both have bisexuality validated and supported by these various areas and people, and also have bisexual identity perceived as an integrated and beneficial piece of participants' overall identity.

First and last day reports. For most of the measures that were taken on the first and the last day of the month, there were no significant differences between time one and

time two. This indicates that despite reported experiences of positive and negative identity experiences, self-esteem, negative affect, feeling of social belonging, and identity certainty and centrality are fairly stable, at least over the timespan of a month. However, there was a significant difference in reports of positive affect between time one and time two, with the average level of positive affect being lower at time two. While there were no included questions for why participants reported the level of positive affect they did, it may be possible that taking notice and recording negative identity experiences and microaggressions could have impacted the level of positive affect. Anecdotally, a few participants discussed how they had not really noticed microaggressions such as bisexuality being omitted from general statements about the LGBTQ community until taking part in the study, and it may be noticing such things on a more frequent basis could negatively impact affect.

Longitudinal trajectories. The initial hypotheses generated from IT were not supported by the results of the current study. The SEM model fit indices demonstrated the theoretical model of changes in stress, anxiety, and health behaviors as predicted by negative and positive identity events then predicting change in self-esteem, social belonging, identity certainty and centrality, and affect was not a plausible representation of the observed data. Additionally, there were no significant relationships between changes in stress, anxiety, or health behaviors and the remaining dependent variables. Based on these data, it does not appear as though identity threat or identity verification play a significant role in *causing* changes in self-esteem, social belonging, identity certainty and centrality, and affect as predicted in Hypotheses 4-6.

However, there does appear to be a relationship between starting reports of self-esteem, social belonging, identity certainty and centrality, and affect and ratings of stress and anxiety. Testing whether the theoretical model of these variables as significant predictors for the initial status of stress, anxiety, and health behaviors is a good representation of the observed data, I found relatively reasonable data fit indices. This indicates that these models are plausible representations or explanations of the observed data. While the data fit information was reasonable for each model testing stress, anxiety, and health behaviors, it was the first two (stress and anxiety) that found some of the predictors to be significant.

The proposed stress model explains 96.3% of the variance and covariance in the data, and the weekly reports of stress decreased over the course of the month. In the case of the stress SEM, initial reports of negative affect was found to be a significant predictor of both initial status for stress and for change in reports of stress over time. Since the influence was positive, negative affect was responsible for higher initial levels of stress, as well as for a slightly higher increase in stress across the month compared to participants with lower levels of negative affect. While it does not appear as though stress causes higher levels of negative affect based on this dataset, there does still seem to be a significant relationship between stress and negative affect, with higher levels of negative affect predicting higher levels of stress.

The proposed anxiety model accounted for 95.3% of the variance and covariance in the data, and weekly reports of anxiety decreased over the course of the month. Initial reports of negative affect also play a role in the anxiety SEM, in addition to self-esteem and identity certainty and centrality. The only significant predictor of initial status of

anxiety was negative affect, which again predicted higher levels of anxiety. As with the stress SEM, negative affect appears to be responsible in some amount for higher starting levels of anxiety among the participants. Negative affect also plays a role in the change in anxiety over time, and specifically predicts an increase in anxiety. Initial reports of self-esteem also positively predict change in anxiety, meaning that higher levels of self-esteem at the start of the study are associated with an increase in anxiety over the course of the month. This is counter-intuitive to most research on self-esteem, as it is typically seen as protective against depression and anxiety (Greenberg, et. al, 1992; Mann, et. al, 2004).

Finally, reports of identity certainty and centrality significantly predicted a decrease in reports of anxiety over time. This was also the largest effect of the three significant paths in the model. Therefore, having a higher level of identity certainty and centrality seems to have the most positive impact on the experiences of anxiety for the participants, as a greater level of identity certainty and centrality is related to a significant decrease in reports of anxiety. This is aligned with Hogg's (2004) uncertainty reduction hypothesis in Social Identity Theory, in which having a reduced amount of identity uncertainty is thought to be a healthy experience.

The health behavior SEM explained 95.6% of the variance and covariance within the data. While this model seems to be a good representation of the observed data, it does not appear as though self-esteem, social belonging, identity certainty and centrality, and affect were significant predictors of the changes in health behaviors over the course of the study. Health behaviors did change slightly over the month, as the starting average was .44, and the ending average was -1.06. This indicates that participants engaged in

less than one positive health behavior per week on average at the start of the study, and slightly over 1 negative health behavior per week on average at the end of the study.

Longitudinal correlations. Though specific hypotheses were not made about the correlations in the data, looking at the relationships between verifying and threatening identity experiences, self-esteem, social belonging, identity certainty and centrality, and affect can help us better understand the experiences of the participants. Participant ratings of identity certainty and centrality were significantly positively related to positive identity experiences at a moderate magnitude, as well as negative identity experiences at a slightly lower correlation coefficient. This relationship between both positive and negative events may possibly be explained by the notion that people with higher levels of identity certainty and centrality may just be more likely to be in situations where they experience events related to their bisexual identity, regardless of the valence of that event. Past literature on level of “outness” supports this notion, as individuals who are “more out” at work than others experience both positive influences on their overall health as well as higher levels of discrimination and prejudice based on their sexual identities. It may be that having bisexuality be a more central component to one’s identity could result in a similar effect, increasing the likelihood of both positive and negative experiences. This is also potentially supported by the positive relationship between negative and positive identity experiences. Again, if someone is more “out” or considers their sexual identity to be a more central component to their sense of self, it is reasonable that that could result in a greater frequency of experiences associated with their identity regardless as to whether the experience is positive or negative.

Identity certainty and centrality scores were also positively correlated with reports of social belonging and positive affect. It makes intuitive sense that those for whom bisexual identity is a more central identity component and who have high levels of identity certainty would perhaps feel as though they fit into the bisexual community more than do those for whom bisexuality is a less central or certain identity. Further, the positive relationship between positive affect and identity certainty and centrality seems to fit with the overall feelings about orientation with this sample. Since the average feeling about being bisexual was very high for the participants, it is reasonable that perceiving bisexuality as a central identity is related to general positive feelings. Further, having lower levels of uncertainty about one's identity has also been linked to lower levels of distress, which may have a positive influence on mood.

Positive affect is also significantly negatively related to negative affect at a moderate magnitude, and positively related to self-esteem. Finally, negative affect is significantly negatively related to self-esteem. Each of these relationships is consistent with the literature on self-esteem, positive affect, and negative affect (Mann, et. al, 2004).

Limitations and Future Research

Study One. The main limitation for study one is that the sample is not quite large enough, and it is a convenience sample from a university setting. While I was predominantly interested in how the manipulation would affect younger bisexual people (age 18-30), it would be beneficial to have more representation of people from the upper part of that range, as well as to have more variance on level of education since all participants were college-level students.

Future research in this area should include the following: analysis of internalized bi-negativity in association with the dependent measures in order to see whether that is an influential factor on whether or not it is positive to be seen as similar or dissimilar to other bisexuals, investigation of whether difference is perceived as a valued identity component for bisexual youth, and whether studies testing the application of SIT and SCT on other ambiguous identities results in similar findings. These research avenues would help further determine possible causes for the surprising results of Study One.

Study Two. The limitations for Study Two are similar to that of the first—the sample mean age was on the younger end of the 18-30 range, and was a convenience sample gathered from both the University of Hawaii at Manoa and Internet-based communities. The sample for Study Two was much more geographically diverse than Study One, including participants from the U.S., Canada, the UK, Australia, Spain, and the Netherlands. However, the sample was also more racially homogenous than Study One, with the majority of participants identifying as white. Further, as many participants were recruited from existing communities and listserves catering to bisexual people (such as the bisexual subreddit, r/bisexual) the sample may not be representative of a general bisexual population.

Future research based on the results from Study Two could include creating more generalized questionnaires based on the qualitative information gathered about threatening, negative affirming, and positive affirming identity experiences. Researchers may be able to garner a more complete understanding of how frequent some of the positive and negative identity experiences are by creating checklists such as the

microaggression checklist from this data in order to make it more feasible to use larger, more representative samples of the bisexual population.

Conclusion

In sum, it does not appear based on this research that SIT, SCT, and IT applies to bisexual identity in the same way it applies to other social and individual identities. The predictions generated from SCT and SIT in Study One were not supported by the data, and in fact the data were trending in the opposite direction of the hypotheses. Being told that one is a more prototypical bisexual appeared to have a negative influence on participants in terms of self-esteem, negative affect, and identity certainty and centrality, while being told one is less prototypical had a positive effect on these areas.

Additionally, the hypotheses generated from IT were not supported by the findings from Study Two. The number of positive and negative identity experiences did not appear to significantly influence affect, self-esteem, social belonging, or identity certainty and centrality over the course of the month. Negative affect, self-esteem, social belonging, and identity certainty and centrality all appear to be relatively stable throughout the timespan of a month. Though the occurrence of positive and negative events did not have a strong influence on the outcome variables, negative affect was a significant predictor for stress—a higher level of negative affect was associated with an increase in stress over time. Negative affect was also associated with higher initial levels of anxiety as well as an increase in anxiety over the course of the month, as was self-esteem. Finally, identity certainty and centrality was associated with a decrease in anxiety over time.

The current research is an advance in lessening the disparity in amount of research conducted between bisexual and monosexual populations, as well as a step toward understanding how current social psychological theory applies to bisexual populations. Finally, the results of this study help not only shed light on the lived identity experiences of bisexual individuals, but also help generate new and interesting research questions. I personally am most excited about this last aspect, as I hope to be able to continue to work with bisexual people and communities to better understand sexual identity and the impact it has on the lives, experiences, and health of bisexual people.

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Appendix A

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way today. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	a little	moderately	quite a bit	extremely

_____ interested	_____ irritable
_____ distressed	_____ alert
_____ excited	_____ ashamed
_____ upset	_____ inspired
_____ strong	_____ nervous
_____ guilty	_____ determined
_____ scared	_____ attentive
_____ hostile	_____ jittery
_____ enthusiastic	_____ active
_____ proud	_____ afraid

Current Thoughts Scale

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you RIGHT NOW.

Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

- 1 = not at all
- 2 = a little bit
- 3 = somewhat
- 4 = very much
- 5 = extremely

1. I feel confident about my abilities.
2. I am worried about whether I am regarded as a success or failure.
3. I feel satisfied with the way my body looks right now.
4. I feel frustrated or rattled about my performance.
5. I feel that I am having trouble understanding things that I read.
6. I feel that others respect and admire me.
7. I am dissatisfied with my weight.
8. I feel self-conscious.
9. I feel as smart as others.
10. I feel displeased with myself.
11. I feel good about myself.
12. I am pleased with my appearance right now.
13. I am worried about what other people think of me.
14. I feel confident that I understand things.
15. I feel inferior to others at this moment.
16. I feel unattractive.
17. I feel concerned about the impression I am making.
18. I feel that I have less scholastic ability right now than others.
19. I feel like I'm not doing well.
20. I am worried about looking foolish.

Social Belonging Scale

Please respond to the following items by writing one of the following numbers by each statement:

- 1= Strongly Disagree
- 2= Disagree
- 3= Neither agree or disagree
- 4= Agree
- 5= Strongly Agree

1. I feel that I belong to the bisexual community.
2. I am happy to be a part of the bisexual community.
3. I see myself as a part of the bisexual community.
4. The bisexual community is one of the best communities anywhere.
5. I feel that I am a member of the bisexual community.
6. I am content to be a part of the bisexual community.

Identity Certainty and Centrality

For each of the following questions, please select which answer best describes how you feel: 1—*strongly disagree*, 2—*disagree*, 3—*neutral*, 4—*agree*, 5—*strongly agree*.

1. Overall, being bisexual has very little to do with how I feel about myself.
2. In general, being bisexual is an important part of my self-image.
3. My destiny is tied to the destiny of other bisexual people.
4. Being bisexual is unimportant to my sense of what kind of person I am.
5. I have a strong sense of belonging to bisexual people.
6. I have a strong attachment to other bisexual people.
7. Being bisexual is an important reflection of who I am.
8. Being bisexual is not a major factor in my social relationships.
9. I feel certain about my sexual identity.
10. I feel like an imposter when I claim a bisexual identity.
11. I feel like I have not had enough other-sex sexual experiences to be fully comfortable with claiming a bisexual identity.
12. I feel like I have not had enough same-sex sexual experiences to be fully comfortable with claiming a bisexual identity.
13. I feel like I have not had enough other-sex romantic experiences to be fully comfortable with claiming a bisexual identity.
14. I feel like I have not had enough same-sex romantic experiences to be fully comfortable with claiming a bisexual identity.
15. My level of comfort with my bisexual identity is not dependant upon my past or present sexual behavior.
16. My level of comfort with my bisexual identity is not dependant upon my past or present romantic relationships.
17. It is likely that my sexual identity will change over the course of my life.
18. I feel secure in my sexual identity.

The Klein Sexuality Grid				
	Variable	Past	Present	Ideal
A	Sexual Attraction			
B	Sexual Behavior			
C	Sexual Fantasies			
D	Emotional Preference			
E	Social Preference			
F	Heterosexual/Homosexual Lifestyle			
G	Self Identification			

For variables A to E:

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

For variables F and G:

- 1 = Heterosexual only
- 2 = Heterosexual mostly
- 3 = Heterosexual somewhat more
- 4 = Hetero/Gay-Lesbian equally
- 5 = Gay/Lesbian somewhat more
- 6 = Gay/Lesbian mostly
- 7 = Gay/Lesbian only

Demographic Information

What is your age? _____

What is your gender?

Male

Female

Other: _____

Choose not to disclose

Which group(s) best describe(s) your ethnic identity, or the ethnic group(s) with which you most strongly identify? Check all that apply.

African, African-American

American Indian or Alaskan Native

Caucasian

Chinese

Filipino(a)

Hawaiian, Part-Hawaiian

Hispanic/Latino(a)/Mexican-American

Japanese

Korean

Middle Eastern

Other Asian

Pacific Islander (Samoan)

Indian, Pakistani, and other South Asians

Portuguese

Other: _____

Choose not to disclose

How would you describe your religious affiliation?

Atheist

Agnostic

Spiritual

Religious

Choose not to disclose

How atheist/ agnostic/ spiritual/ religious are you?

Not at all

Somewhat

Completely

How would you describe your sexual orientation?

Heterosexual

Bisexual

Homosexual

Other: _____

Choose not to disclose

Appendix B

Laboratory Study Script

Hi, my name is _____, and I will be conducting the experiment for today. Before we begin, please read this informed consent form. If, after reading, you wish to continue your participation in the study, please sign at the bottom. If you decide you do not want to participate, simply leave the signature line blank and you will be free to go. Remember, your participation is completely voluntary, and you will not be penalized in any form for terminating your participation. Additionally, though participating in this study, you may be exposed to information about your personal sexual identity that may cause you to become distressed. If you feel like learning new information about your sexual identity may distress you, you can choose not to continue.

Research assistant hands participant informed consent, allows participant to read through and sign/not sign.

Thank you. As you may remember, you were recruited for this study because you indicated you identified as bisexual. The purpose of this study is to better understand how bisexual people respond to the Minnesota Multiphasic Personality Inventory, also known as the MMPI. Previous research has been conducted on a large-scale bisexual sample, and we are interested in continuing that research.

The first portion of this study is the completion of the MMPI. Please complete the survey to the best of your ability. Please let me know when you have finished.

Research assistant hands participant a copy of the MMPI, waits for the participant to complete it.

Thank you for completing the MMPI. Please wait while I look over your responses, and I will be able to give you feedback on how your responses matched the responses of the previous large-scale bisexual sample.

Research assistant “grades” the participant responses. In the negative false feedback condition, RA marks 60% as “incorrect.” In the positive false feedback condition, RA marks only 5% as “incorrect.”

Low prototypicality condition

Here is your personality survey. Please take a minute to look through your responses. As you can see, only 40% of your responses match the responses from the previous sample. These results indicate that you do not seem to have many of the central defining traits and characteristics of bisexuality. You did not respond like most people who are bisexual would respond, indicating you are not a typical bisexual person. Nevertheless, we will continue with the rest of the study.

High prototypicality condition

Here is your personality survey. Please take a minute to look through your responses. As you can see, 95% of your responses match the responses from the previous sample. These results indicate that you seem to have many of the central defining traits and characteristics of bisexuality. You responded like most people who are bisexual would respond, indicating that you are very much like the typical bisexual person. Nevertheless, we will continue with the rest of the study.

RA takes a GSR measure immediately after delivering the false feedback. After, (s)he hands the participant a packet containing the rest of the dependent measures.

Please fill out each of these surveys, to the best of your ability. When you have finished, place them into this folder and let me know that you are done.

Thank you. We are almost done, but before I let you go I have a few questions.

RA goes through both the manipulation and deception check questionnaires with the participant.

Great, now we are finished with the study. Now I will read the debriefing form to you, and then you will be free to go.

RA reads through the debriefing form.

Do you have any other questions or comments for me? Thank you very much for your participation.

Appendix C**Manipulation Check**

The research assistant will ask the following questions of the participant.

1. How similar were you to other bisexual people based on the measurement feedback?
1-not similar at all,
2-poor similarity,
3-average similarity,
4-very similar ,
5-exactly the same
2. Do you agree with this similarity rating? Why or why not?

Deception Check

The research assistant will ask the following questions of the participant.

1. Can you summarize what this experiment was about?
2. What, if anything, do you think the researchers are interested in?
3. Was there anything that stuck out to you as odd about the experiment?
4. Are there any questions you would like to ask about the experiment?
5. Do you have any general comments about the experiment?

Appendix D

University of Hawai'i at Manoa

Consent to Participate in Research Project:

Bisexual Identity and Personality Traits

My name is Corey Flanders, M.A. I am a graduate student at the University of Hawai'i at Manoa (UH), in the department of Psychology. As part of my graduate program requirements, I conduct research. The purpose of my current research project is to investigate certain personality traits in individuals who identify as bisexual. I am asking you to participate in this research project because you indicated you identify as bisexual.

Project Description—Activities and Time Commitment: If you decide to participate, either a research participant or I will conduct a laboratory study lasting for approximately 60 minutes. Your participation will include completing a variety of personality and mood surveys.

Benefits and Risks: I believe that there are no direct benefits to you in participating in my research project. However, the results of this project might help me and other researchers learn more about mood and personality in bisexual individuals, a population that is very underrepresented in the scientific community. I believe there is little to no risk to you in participating in this project. If, however, you are uncomfortable or stressed by answering any of the survey questions, you may skip the question, take a break, stop completing the survey, or withdraw from the project all together.

Confidentiality and Privacy: During this research project, I will keep all data from the surveys in a secure location. Only my research assistants and I will have access to the data, although legally authorized agencies, including the University of Hawai'i Human Studies Program, have the right to review the research.

You will not be asked to reveal or report any identifying information, such as your name, by participating in this study. Thus, your name, or any other identifying information, will be in no way linked to your responses.

Voluntary Participation: Participation in this research project is voluntary. You can choose freely to participate or not to participate. In addition, at any point during this project, you can withdraw your permission without any penalty or loss of benefits.

Questions: If you have any questions about this project, please contact me via email (coreyef@hawaii.edu). If you have any questions about your rights as a research participant, in this project, you can contact the University of Hawai'i Human Studies Program, by phone at (808) 956-5007, or by e-mail at uhirb@hawaii.edu.

Please keep the prior portion of this consent form for your records.

If you agree to participate in this project, please check the following portion of this consent form and return it to the research assistant.

Check for Consent:

I agree to participate in the research project entitled, *Bisexual Identity and Personality Traits*. I understand that I can change my mind about participating in this project, at any time, by notifying the researcher.

Check if you agree with the previous statement: _____

Date: _____

Appendix E

Debriefing Form

The following statement will be read to the participant.

The experiment is now complete. Thank you for your time and participation. Before you leave, I would like to tell you about the true purpose of the experiment. The experiment does not actually measure how similar or dissimilar bisexual people are compared to other bisexuals. You received false feedback about how closely you matched other bisexual respondents. There is not actually a previous study that collected personality trait responses from other bisexual people.

This experiment was designed to test whether or not manipulating self-perceived bisexual prototypicality, or how well a bisexual individual matched up to defining characteristics of bisexuality, could influence various reactions such as stress, mood, and self-esteem.

You were told in this experiment that you were a (excellent/poor) match of a bisexual personality. However, this was false feedback. Your responses on the personality inventory in no way reflect how closely you match a bisexual personality. Your responses were not actually graded by the research participant, nor will any researcher review them. In addition, the personality inventory you completed is not considered to be in any way a measure of bisexual personality. Thus, we have no way of knowing through this experiment how closely you match a bisexual prototype. In fact, there is little agreement on what a bisexual prototype would look like, as there is such a wide array of individuals who identify as bisexual, as well as definitions of what it is to be bisexual. Here is a brief response written by a sexual identity expert describing this lack of agreement. (*Hand them copy of article.*)

As the success of this experiment depends upon future participants being unaware of the true purpose of this experiment, we request that you do not speak to any of your classmates or other individuals about the true purpose of this experiment. If asked, we suggest that you merely tell people we were interested in personality trait responses from various types of people.

Finally, I have a few last questions for you before you go.

Who graded your personality survey questions? ANSWER: NO ONE

What are your overall impressions or feelings about your experience with the experiment?

Did you feel at all anxious or threatened by the feedback? If so, what was anxiety provoking or threatening?

Did you find the manipulation believable? Why or why not?

If not, what would have made the manipulation more believable?

Is there anything you would change or do differently about this experiment? If so, what?

Are you willing to not tell others about the true purpose of this experiment?

Again, thank you so much for your participation.

Appendix F

Daily Diary Measures

Identity Verification Experience

1. In the last 24 hours, I had an experience that I felt invalidated my bisexual identity. YES NO
 - a. If yes, please describe the experience.
2. In the last 24 hours, I had an experience that I felt affirmed my bisexual identity in a positive way. YES NO
 - a. If yes, please describe the experience.
3. In the last 24 hours, I had an experience that I felt affirmed my bisexual identity in a negative way. YES NO
 - a. If Yes, please describe the experience.

Microaggression Experience

Please check if this happened to you today, or if something similar happened.

1. You were asked if you chose to be bisexual, or why you chose to be bisexual.
2. You heard someone use the term “gay” to mean bad or stupid.
3. You heard someone use a sexual minority slur.
4. Someone used a sexual minority slur against you.
5. Someone stated or implied that you should “act straight.”
6. Someone assumed or stated that you are heterosexual.
7. Someone assumed or stated that you are homosexual.
8. You were told bisexuality is just a phase.
9. Someone implied or stated that bisexuality is not a real sexual identity.
10. Someone remarked that they did not understand how someone could be bisexual.
11. Someone implied that you probably wouldn’t identify as bisexual later.
12. Someone assumed you must have come out to everyone.
13. Someone assumed you came out as an older teenager or young adult.
14. Someone assumed you must be like another person they know because both of you are bisexual.
15. You were asked whether or not you have HIV/AIDS.
16. You were asked whether you have had many sexual partners.
17. You were asked how many men/women you have had sex with.
18. You were asked how many relationships you have been in with men/women.
19. You were asked how long it has been since you’ve had sex with a man/woman.
20. You were asked how long it has been since you’ve been in a relationship with a man/woman.
21. You heard someone omit bisexuality when they were speaking about sexual minorities in general.
22. You felt compelled to identify yourself as bisexual to someone else.

Health Behaviors

Please answer (yes or no) for each question with the past 24 hours in mind.

1. I missed work or school.
2. I stayed in bed due to illness.
3. I smoked one or more cigarettes.
4. I had 1-2 alcoholic beverages.
5. I had 3 or more alcoholic beverages.
6. I participated in recreational drug use.
7. I engaged in risky sexual behavior (i.e. unprotected sex)
8. I engaged in 20 minutes of exercise or more.
9. I ate at least 5 servings of fruit and vegetables.
10. I made a wellness appointment with a health professional.
11. I made an appointment with a health professional because of an illness.
12. I attended a wellness appointment with a health professional.
13. I attended an appointment with a health professional because of an illness.
14. I restricted myself from ordinary activities due to illness.
15. I took some form of over the counter medication.
16. I took some form of prescription medication (other than birth control).
17. How stressed did you feel today on a 1-5 scale (1=not stressed at all, 5=extremely stressed)?
18. How anxious did you feel today on a 1-5 scale (1=not anxious at all, 5=extremely anxious)?

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way today. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	a little	moderately	quite a bit	extremely

_____	interested	_____	irritable
_____	distressed	_____	alert
_____	excited	_____	ashamed
_____	upset	_____	inspired
_____	strong	_____	nervous
_____	guilty	_____	determined
_____	scared	_____	attentive
_____	hostile	_____	jittery
_____	enthusiastic	_____	active
_____	proud	_____	afraid

Current Thoughts Scale

This is a questionnaire designed to measure what you are thinking at this moment. There is, of course, no right answer for any statement. The best answer is what you feel is true of yourself at this moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you RIGHT NOW.

Using the following scale, place a number in the box to the right of the statement that indicates what is true for you at this moment:

- 1 = not at all
- 2 = a little bit
- 3 = somewhat
- 4 = very much
- 5 = extremely

- 21. I feel confident about my abilities.
- 22. I am worried about whether I am regarded as a success or failure.
- 23. I feel satisfied with the way my body looks right now.
- 24. I feel frustrated or rattled about my performance.
- 25. I feel that I am having trouble understanding things that I read.
- 26. I feel that others respect and admire me.
- 27. I am dissatisfied with my weight.
- 28. I feel self-conscious.
- 29. I feel as smart as others.
- 30. I feel displeased with myself.
- 31. I feel good about myself.
- 32. I am pleased with my appearance right now.
- 33. I am worried about what other people think of me.
- 34. I feel confident that I understand things.
- 35. I feel inferior to others at this moment.
- 36. I feel unattractive.
- 37. I feel concerned about the impression I am making.
- 38. I feel that I have less scholastic ability right now than others.
- 39. I feel like I'm not doing well.
- 40. I am worried about looking foolish.

Social Belonging Scale

Please respond to the following items by writing one of the following numbers by each statement:

1= Strongly Disagree

2= Disagree

3= Neither agree or disagree

4= Agree

5= Strongly Agree

7. I feel that I belong to the bisexual community.
8. I am happy to be a part of the bisexual community.
9. I see myself as a part of the bisexual community.
10. The bisexual community is one of the best communities anywhere.
11. I feel that I am a member of the bisexual community.
12. I am content to be a part of the bisexual community.

Identity Certainty and Centrality

For each of the following questions, please select which answer best describes how you feel: 1—*strongly disagree*, 2—*disagree*, 3—*neutral*, 4—*agree*, 5—*strongly agree*.

19. Overall, being bisexual has very little to do with how I feel about myself.
20. In general, being bisexual is an important part of my self-image.
21. My destiny is tied to the destiny of other bisexual people.
22. Being bisexual is unimportant to my sense of what kind of person I am.
23. I have a strong sense of belonging to bisexual people.
24. I have a strong attachment to other bisexual people.
25. Being bisexual is an important reflection of who I am.
26. Being bisexual is not a major factor in my social relationships.
27. I feel certain about my sexual identity.
28. I feel like an imposter when I claim a bisexual identity.
29. I feel like I have not had enough other-sex sexual experiences to be fully comfortable with claiming a bisexual identity.
30. I feel like I have not had enough same-sex sexual experiences to be fully comfortable with claiming a bisexual identity.
31. I feel like I have not had enough other-sex romantic experiences to be fully comfortable with claiming a bisexual identity.
32. I feel like I have not had enough same-sex romantic experiences to be fully comfortable with claiming a bisexual identity.
33. My level of comfort with my bisexual identity is not dependant upon my past or present sexual behavior.
34. My level of comfort with my bisexual identity is not dependant upon my past or present romantic relationships.
35. It is likely that my sexual identity will change over the course of my life.
36. I feel secure in my sexual identity.

Definitions of Bisexuality

1. In general, how would you define bisexuality?
2. What does being bisexual mean to you personally?
3. How would you describe your bisexual identity to someone else?
4. What type of behaviors does a person need to exhibit in order to be bisexual, if any?
5. What type of desires does a person need to exhibit in order to be bisexual, if any?
6. Do you consider to following descriptions to be an accurate description of bisexuality? Check all that apply:
 - a. Someone who is romantically interested in two genders.
 - b. Someone who is sexually interested in two genders.
 - c. Someone who has had relationships with two genders.
 - d. Someone who has had sex with two genders.
 - e. Someone who has the capacity for romantic interest with two genders.
 - f. Someone who has the capacity for sexual interest with two genders.
 - g. Someone who is sexually interested in only one gender.
 - h. Someone who is romantically interested in only one gender.
 - i. Someone who has had relationships with only one gender.
 - j. Someone who has had sex with only one gender.
 - k. Someone who has the capacity for romantic interest with only one gender.
 - l. Someone who has the capacity for sexual interest with only one gender.

The Klein Sexuality Grid				
	Variable	Past	Present	Ideal
A	Sexual Attraction			
B	Sexual Behavior			
C	Sexual Fantasies			
D	Emotional Preference			
E	Social Preference			
F	Heterosexual/Homosexual Lifestyle			
G	Self Identification			

For variables A to E:

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

For variables F and G:

- 1 = Heterosexual only
- 2 = Heterosexual mostly
- 3 = Heterosexual somewhat more
- 4 = Hetero/Gay-Lesbian equally
- 5 = Gay/Lesbian somewhat more
- 6 = Gay/Lesbian mostly
- 7 = Gay/Lesbian only

Demographic Information

What is your age? _____

What is your gender?

Male

Female

Alternate: _____

Choose not to disclose

Which group(s) best describe(s) your ethnic identity, or the ethnic group(s) with which you

most strongly identify? Check all that apply.

African, African-American

American Indian or Alaskan Native

Caucasian

Chinese

Filipino(a)

Hawaiian, Part-Hawaiian

Hispanic/Latino(a)/Mexican-American

Japanese

Korean

Middle Eastern

Other Asian

Pacific Islander (Samoan)

Indian, Pakistani, and other South Asians

Portuguese

Other: _____

Choose not to disclose

How would you describe your religious affiliation?

Atheist

Agnostic

Spiritual

Religious

Choose not to disclose

How atheist/ agnostic/ spiritual/ religious are you?

Not at all

Somewhat

Completely

How would you describe your sexual orientation?

Heterosexual

Bisexual

Homosexual

Alternate: _____

Choose not to disclose

How do you feel about your sexual orientation?

Very negative

Negative

Neutral

Positive

Very positive

Appendix G

University of Hawai'i at Manoa

Consent to Participate in Research Project: *Bisexual Identity Experience and Health Outcomes*

My name is Corey Flanders, M.A. I am a graduate student at the University of Hawai'i at Manoa (UH), in the department of Psychology. As part of my graduate program requirements, I conduct research. The purpose of my current research project is to investigate certain personality traits in individuals who identify as bisexual. I am asking you to participate in this research project because you indicated you identify as bisexual.

Project Description—Activities and Time Commitment: If you decide to participate, you will be asked to complete a 30-day online daily diary. Your participation will include completing a variety of surveys on the first and last day, which will likely take about 30 minutes to complete each time. Otherwise, each daily diary submission will include a brief question about affirming and disconfirming identity experiences you may have had, as well as a short health questionnaire that should take you 3-5 minutes to complete.

Benefits and Risks: I believe that there are no direct benefits to you in participating in my research project. However, the results of this project might help me and other researchers learn more about identity experiences and health outcomes in bisexual individuals, a population that is very underrepresented in the scientific community. I believe there is little to no risk to you in participating in this project. If, however, you are uncomfortable or stressed by answering any of the survey questions or daily diary submissions, you may skip the question, take a break, stop completing the survey or daily diary, or withdraw from the project all together.

Confidentiality and Privacy: During this research project, I will keep all data from the surveys and daily diary submissions in a secure, password protected online location. Only my research assistants and I will have access to the data, although legally authorized agencies, including the University of Hawai'i Human Studies Program, have the right to review the research.

You will not be asked to reveal or report any identifying information, such as your name, by participating in this study. Thus, your name, or any other identifying information, will be in no way linked to your responses.

Voluntary Participation: Participation in this research project is voluntary. You can choose freely to participate or not to participate. In addition, at any point during this project, you can withdraw your permission without any penalty or loss of benefits.

Questions: If you have any questions about this project, please contact me via email (coreyef@hawaii.edu). If you have any questions about your rights as a research participant, in this project, you can contact the University of Hawai'i Human Studies Program, by phone at (808) 956-5007, or by e-mail at uhirb@hawaii.edu.

Please print the prior portion of this consent form for your records.